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SATELLITE TEMPERATURE SOUNDING OF THE ATMOSPHERE: GROUND TRUTH --ETC(U)
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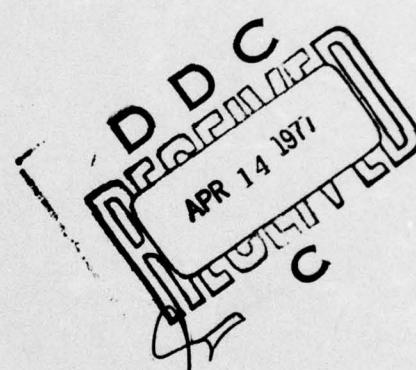
AFGL-TR-76-0279
AIR FORCE SURVEYS IN GEOPHYSICS, NO. 356



Satellite Temperature Sounding of the Atmosphere: Ground Truth Analysis

ROBERT A. McCLATCHY

19 November 1976



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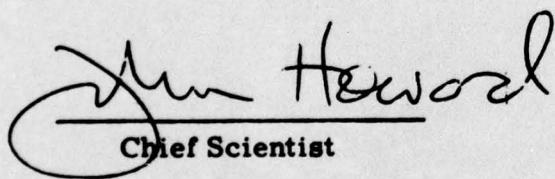


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John Howard
Chief Scientist

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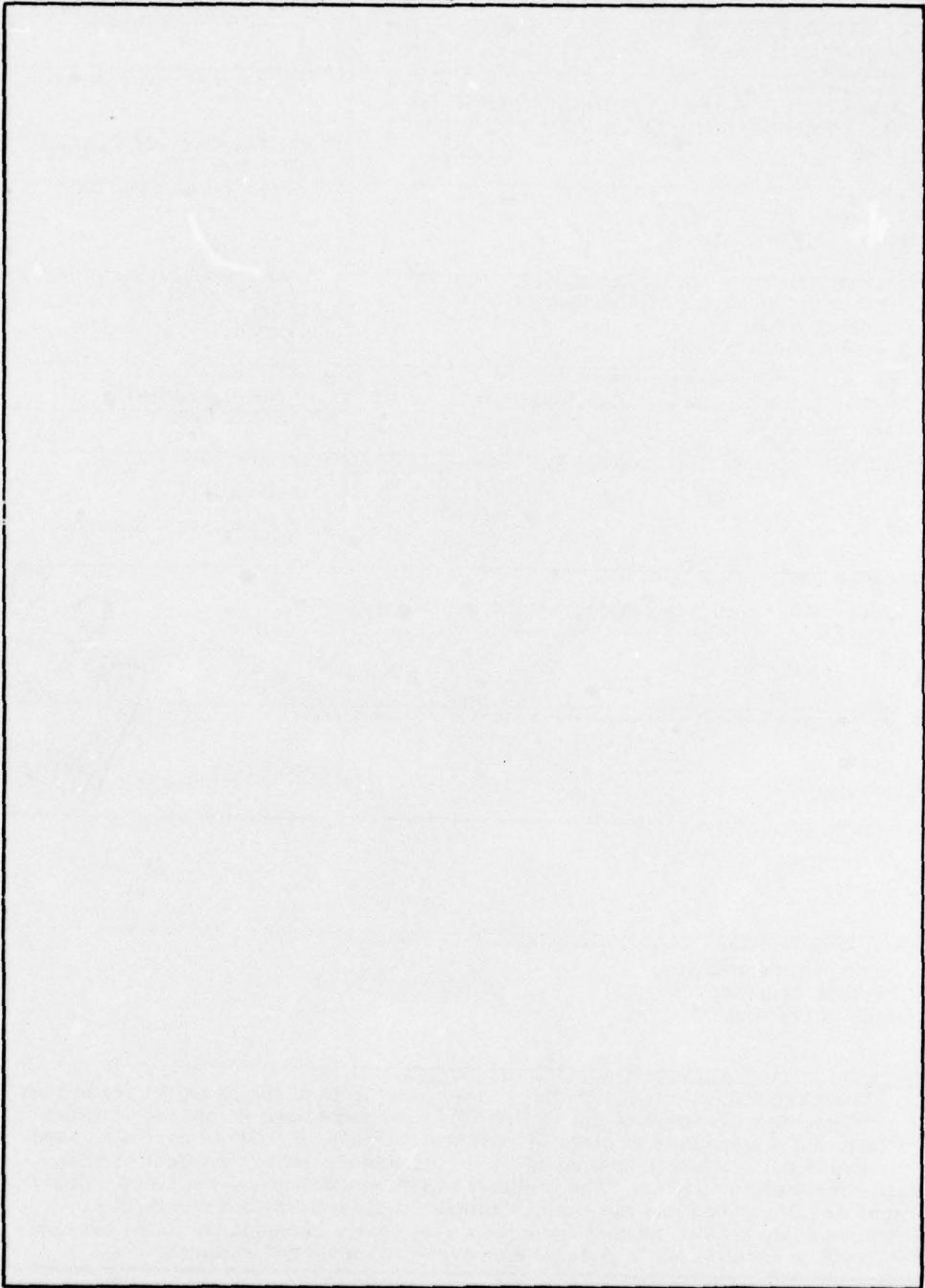
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Satellite Temperature Sounding of the Atmosphere: Ground Truth Analysis

I. INTRODUCTION

Since satellite-borne temperature sounding of the atmosphere was first suggested as a practical measurement, the 15- μm region of carbon dioxide absorption (and emission) has been utilized. The suggestion to use the 15- μm band was first made in 1959 by Kaplan.¹ By the mid 1960's, instruments were built and flown by NOAA, and temperature sounding was a reality. By 1972 the first sounder package was flown on a Defense Meteorological Satellite.

Throughout this period, attempts at ground truth comparisons left unexplained discrepancies. These discrepancies were generally dealt with in the software of data analysis schemes, by adjusting transmittances, by adjusting measurements, or by the development of inversion algorithms equivalent to a giant look-up scheme among a climatological library of measured radiances associated with known temperature profiles. It is hoped that through careful analysis, we might better understand some of the causes for discrepancies between measurement and calculation and then discover methods of correcting the errors. In this way we may eventually obtain temperature soundings without recourse to climatological data and we will be more certain that inferred temperatures are a direct result only of the satellite measurements themselves and not simply the result of the climatological statistics used in the interpretation of measured radiances.

(Received for publication 18 November 1976)

1. Kaplan, L. D. (1959) Inference of atmospheric structure from remote radiation measurements, J. Opt. Soc. Amer., 49:1004.

This report represents an analysis of a limited number of Defense Meteorological Satellite radiance observations made during the period from February to April 1975. All of the sounding data and corresponding visible and infrared imagery obtained during the time period were scanned and a small number (9) of cases were identified where satellite observations were obtained in the vicinity of a radiosonde and rocketsonde site and conditions were deemed by us to be clear. We also demanded that the satellite track over the "ground truth" site was within 100 nm of the station and within 3 hr of the radiosonde/rocketsonde launch time.

The decision was made at the outset that measured and computed radiances would be compared (as opposed to temperatures). This decision allows the questions associated with temperature inversion to be removed from discussion here. Allowing for on-board calibration issues, radiance is the fundamental quantity being measured. Given a sufficiently detailed description of the atmosphere in terms of temperature and absolute humidity as functions of pressure, and given a detailed description of the filter functions in the 15 μm band channels, and given an appropriate computation scheme for atmospheric transmittance, the calculation of upwelling radiance is a straightforward problem.

The solution to the equation of radiative transfer is presented in Eq. (1).

$$I_{\Delta\nu} = \left[\int_{\Delta\nu} f(\nu) \int_{\tau_g}^{1.0} B(\nu, T) d\tau d\nu + \int_{\Delta\nu} f(\nu) B(\nu, T_s) d\nu \right] \Big/ \int_{\Delta\nu} f(\nu) d\nu \quad (1)$$

where

$I_{\Delta\nu}$ is the radiant intensity in $\text{W/cm}^2/\text{sr/cm}^{-1}$,

$B(\nu, T)$ is the Planck blackbody function,

T is the atmospheric temperature and T_s is the surface temperature,

τ is the transmittance of the atmosphere from the altitude associated with

the pressure level, p , to the top of the atmosphere,

ν is the frequency (given here in cm^{-1}), and

$f(\nu)$ is the instrument filter function.

If we assume that $B(\nu, T)$ is relatively constant over the width of a filter function (10 or 12 cm^{-1} wide), and if we write $t_x(p)$ as independent variable instead of τ , we obtain Eq. (2), where the quantity, $d\bar{\tau}/dt_x p$, now becomes a weighting function that can be interpreted as defining the atmospheric layer primarily responsible for the upwelling emission in the spectral interval, $\Delta\nu$.

$$I_{\Delta\nu} = \int_{p_g}^0 B(\bar{\nu}, \tau) \frac{d\bar{\tau}}{dt_x p} dt_x p + B(\bar{\nu}, T_s) \quad (2)$$

$$\bar{\tau}_{\Delta} = \frac{f(\nu)\tau(\nu)d\nu}{f(\nu)d\nu} . \quad (3)$$

2. GROUND TRUTH DATA

A list of all stations used in this study together with the dates of measurement are included in Table 4. Table 1 provides the detailed atmospheric profiles of temperature, water vapor, and ozone as functions of pressure. The pressure levels are those reported in the radiosonde and rocketsonde data. Radiosonde information was generally extended from the surface to about the 10 mb pressure level with data at higher altitudes obtained from rocketsondes. The ozone data were not obtained from the radiosonde site, but were introduced from climatological models of ozone distribution. Since ozone only has a minor effect on the atmospheric transmittance in the 15 μm region, this is not expected to lead to serious error.

3. DMSP FILTER FUNCTIONS

Data from two separate satellites are included in this analysis, the Block 5C noon satellite launched 16 March 1974 designated 8531 and the Block 5C morning satellite launched 8 August 1974 designated 9532. Table 2 provides the digitized filter functions for the six channels in the 15 μm CO_2 band for each of these satellite sensors. The listed frequencies are nominally the central frequency for each filter function. Note that the Q-branch filters (located at 668 cm^{-1}), have widths at half-maximum of about 3.5 cm^{-1} whereas the other channels have widths at half-maximum of about 12 cm^{-1} . Note also that the 668 cm^{-1} filters are digitized non-uniformly with a greater spacing near the edges of the filters.

4. ATMOSPHERIC TRANSMITTANCE

The atmospheric transmittances are computed by averaging over the appropriate filter function by first computing the monochromatic transmittances for the appropriate atmospheric path taking into account the temperature, pressure, water vapor, and ozone distributions. These monochromatic transmittances were then weighted by the appropriate filter functions as indicated in Eq. (3) in order to generate the appropriate averaged transmittances. Prior investigations indicated that a monochromatic step of 0.1 cm^{-1} would obtain a result of high accuracy in the vicinity of transmittance near 0.5, even at high altitudes. Therefore, the step size of 0.1 cm^{-1} was used throughout. The AFCRL Atmospheric Absorption Line

Parameters Compilation,² was used for all absorption lines in the spectral region of interest. The calculations were based on the January 1976 data tape. Some recent comparisons of these calculations with some recent measurements³ are presented in Figures 1 and 2.

The Lorentz line shape was used throughout with a line-wing modification of CO₂ proposed by Burch.⁴ This line-shape factor forces all line contributions to zero 15 cm⁻¹ from the line center. In addition to the contributions from water vapor lines in the vicinity of the filters, a contribution is included for the water vapor continuum based on an extrapolation in the 15 μm region from the laboratory measurements of Burch and others as summarized by Bignell.⁵ The absorption coefficient associated with selfbroadening is given in Figure 3 and has been introduced independent of temperature. The ratio of nitrogen broadening to self-broadening was taken to be 0.005. For a more thorough discussion of this matter, see Burch.⁴

The transmittances for the 9 cases included in this investigation are given in Table 3 together with the computed radiances.

5. WEIGHTING FUNCTIONS

The concept of "weighting function" was introduced in Eq. (2). In general, if we are dealing with atmospheric absorption by CO₂ alone and if the atmospheric model is defined with sufficiently detailed stratification, a uniform series of weighting functions would be produced by a calculation of the logarithmic derivative of the transmittance. An example of such a set of curves is shown in Figure 4 which was computed for an atmospheric model containing only CO₂ in the 15 μm region with filters similarly defined as the DMSP filters used in this investigation. Figure 4 was based on the U.S. Standard Atmosphere containing 44 levels between the surface and space. In addition to the standard weighting function defined in Eq. (2), a set of "Energy Functions" can be defined for a given atmospheric profile. Figure 5 provides the corresponding Energy Functions for the U.S. Standard Atmosphere, 1962 and are defined by Eq. (4). These curves have been normalized to

2. McClatchey, R.A., Benedict, W.S., Clough, S.A., Burch, D.E., Calfee, R.F., Fox, K., Rothman, L.S., and Garing, J.S. (1973) AFCRL Atmospheric Absorption Line Parameters Compilation, AFCRL-TR-73-0096.
3. Burch, D.E. (1976) (private communication).
4. Burch, D.E. (1970) Semi-Annual Technical Report: Investigation of the Absorption of Infrared Radiation by Atmospheric Gases, Aeronutronic Report U-4784.
5. Bignell, K.J. (1970) Quart. J. Roy. Met. Soc., 96:409.

unity at their maximum values. In a sense they are more useful than the standard weighting functions as the area under these curves represents the actual energy arising from the atmosphere bounded by any pair of pressure levels.

Owing to the complexity introduced by using the actual radiosonde/rocketsonde pressure levels in our calculations and also the contributions to the weighting functions by the irregular (but realistic) distributions of water vapor in the lower troposphere, the weighting functions shown in Figures 6 and 7 are seen to be less smooth and less regular than those in Figures 4 and 5.

$$E(t \cdot p) = B[\bar{\nu}, T(t \cdot p)] \frac{d\bar{\tau}}{dt \cdot p} \quad (4)$$

6. RADIANCE CALCULATIONS

The calculation of radiance proceeds in a straightforward manner, once the mean transmittances defined in Eq. (3) have been computed, from each pressure level to space. We need only associate a $B(\bar{\nu}, T)$ value with each τ value and find the area under the resulting curve. Examples of the required numerical quadrature are found in Figures 8 and 9 which represent the $B(\bar{\nu}, T)$ vs τ relationship for the 668 and 727 channels for the Barking Sands comparison of 24 February 1975. These curves are seen to be well defined, thus being amenable to simple quadrature techniques. The results of radiance calculations for the nine cases investigated are presented in Table 4 together with the measured radiances. The calculations have assumed that the surface temperature was equal to the lowest altitude temperature reported as part of the radiosonde measurement. This may help to explain the discrepancy in the 746 cm^{-1} channel. In general the results are good only for the 676 cm^{-1} channel. All the other channels show significant discrepancies and on balance the discrepancies are systematic, the calculations being greater than the measurements. At this time, there is no satisfactory explanation for these discrepancies, but we are embarking on a special study of atmospheric transmittance in the $15 \mu\text{m}$ CO_2 band in order to establish the transmittance validity with respect to satellite temperature sounding.

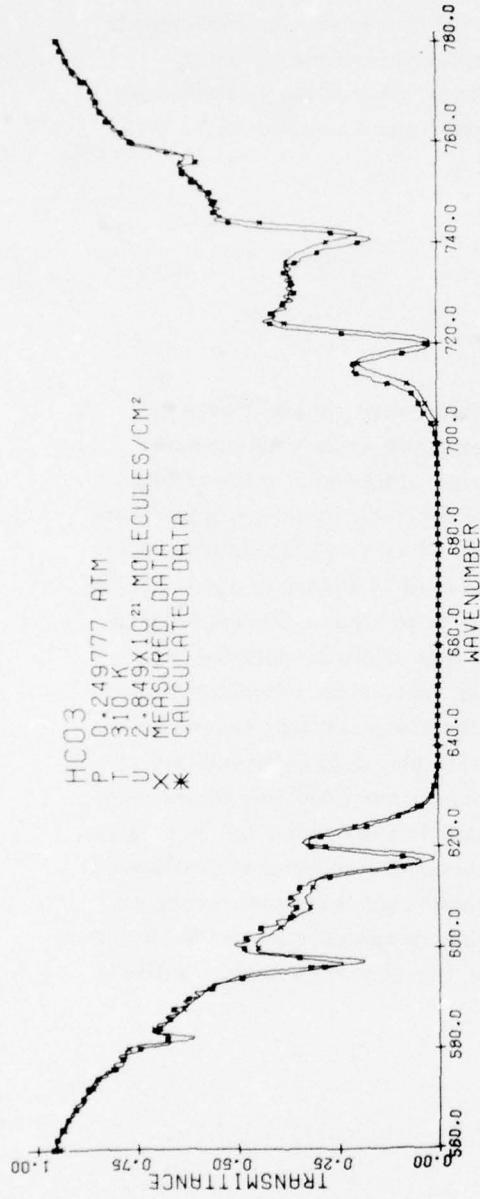


Figure 1. Comparisons of Measured Laboratory Transmittance Spectra With Computations For the 15 μm CO₂ Band For Two Sets of Conditions Corresponding Approximately to an Atmospheric Path From 500 mb to Space

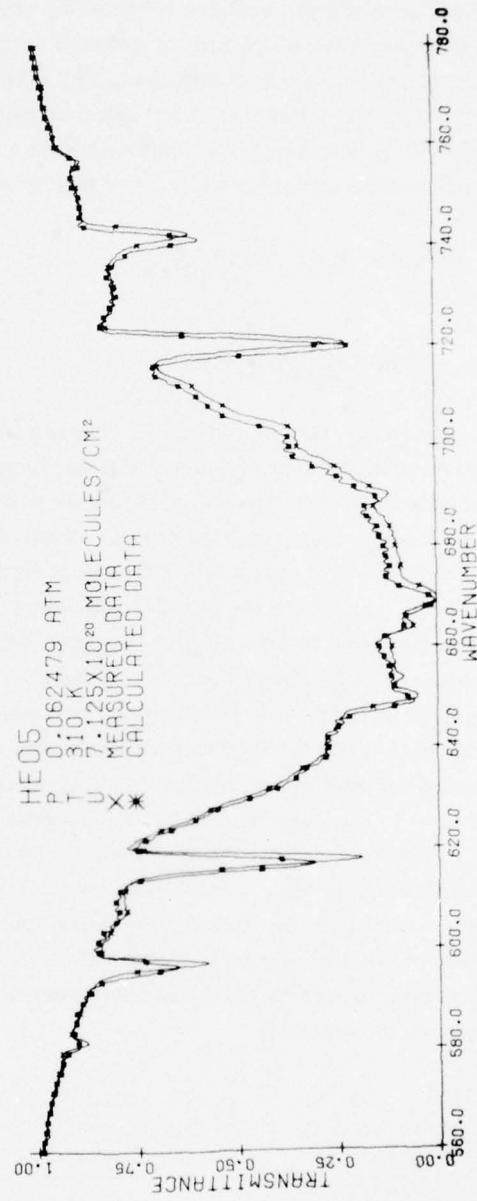


Figure 2. Comparisons of Measured Laboratory Transmittance Spectra With Computations For the 15 μm CO₂ Band For Two Sets of Conditions Corresponding Approximately to an Atmospheric Path From 125 mb to Space

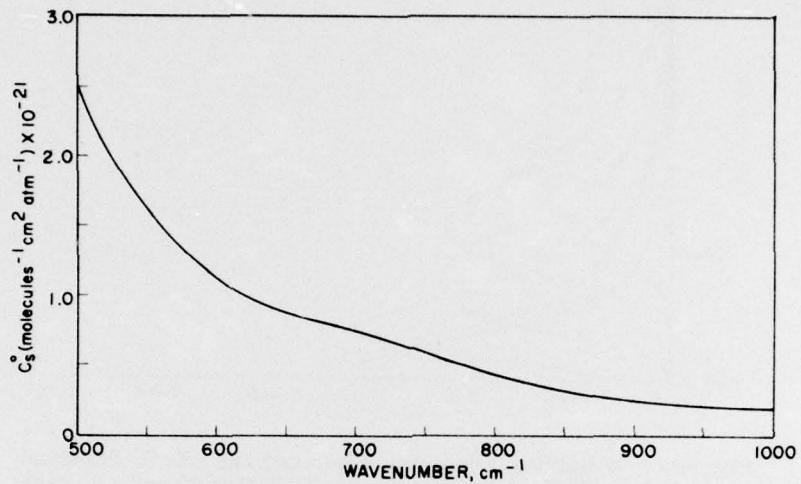


Figure 3. Self-Broadening Absorption Coefficient Used in the Calculation of the Water Vapor Continuum in the $15 \mu\text{m}$ Region

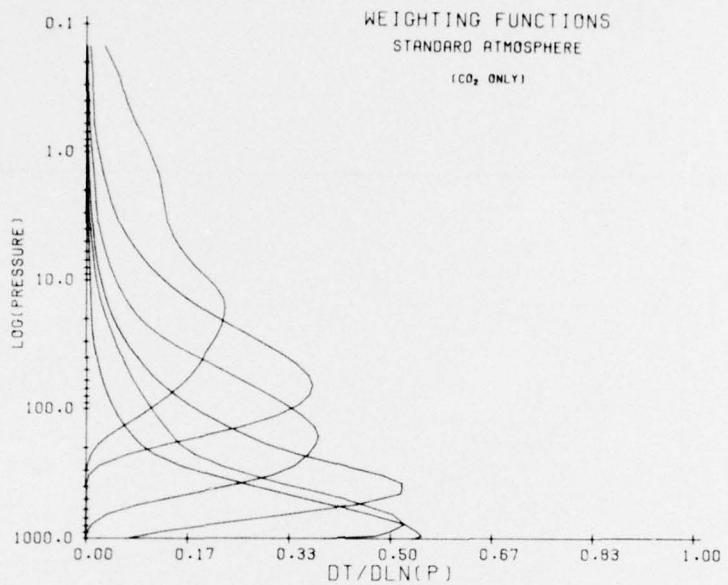


Figure 4. Weighting Functions Computed for a U.S. Standard Atmosphere, 1962 Model Containing No Water Vapor. Central frequencies are the same as the DMSP central frequencies, but filter functions were idealized triangular functions

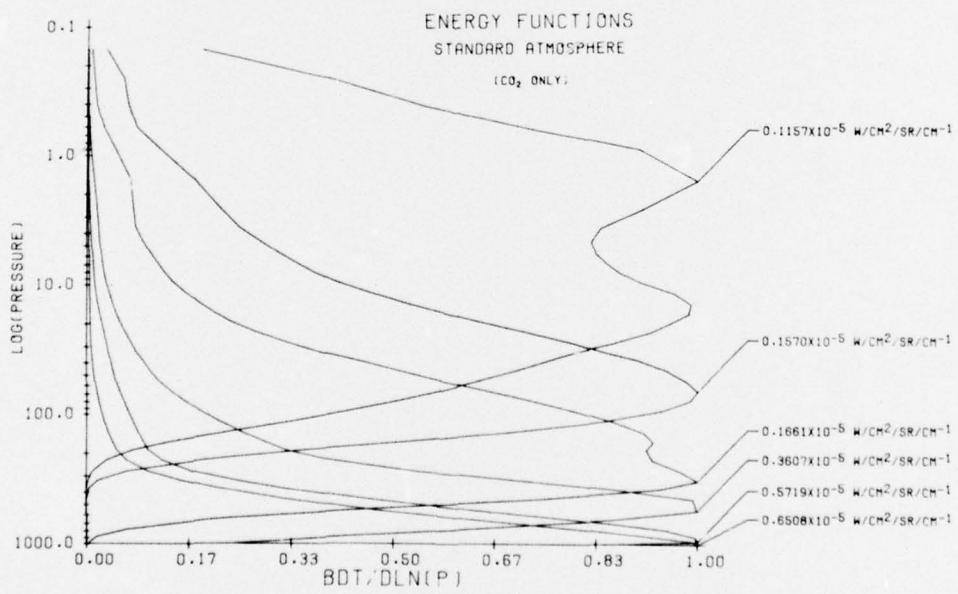


Figure 5. Energy Functions Corresponding to the Weighting Functions of Figure 4

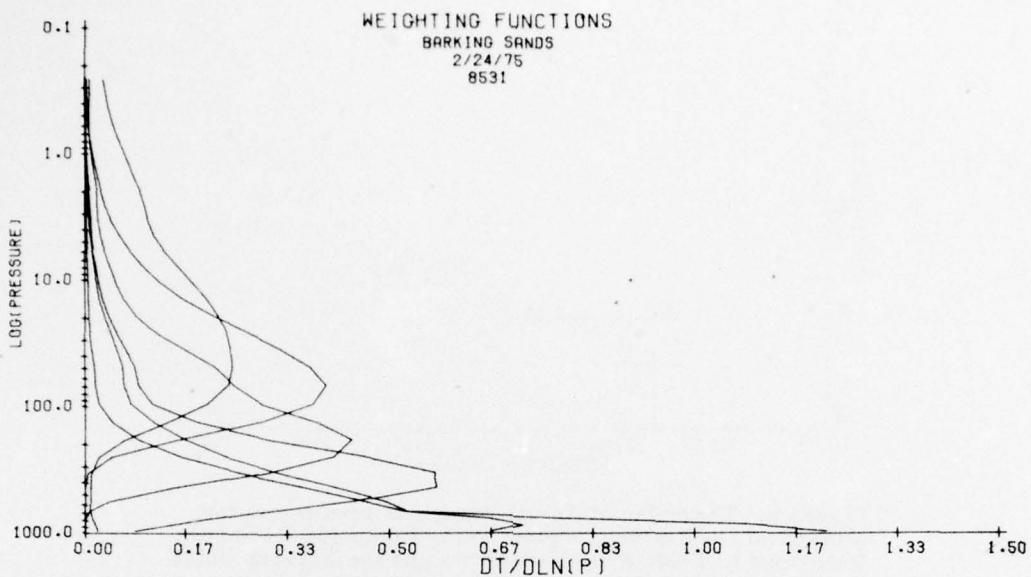


Figure 6. Computed Weighting Functions Corresponding to One of the Actual Atmospheric Soundings Studied

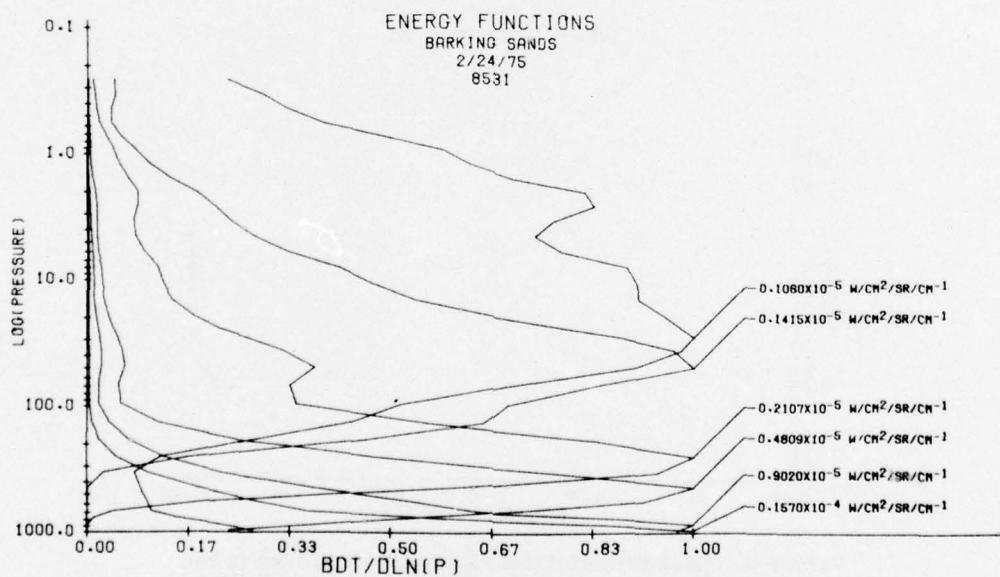


Figure 7. Computed Energy Functions Corresponding to One of the Actual Atmospheric Soundings Studied

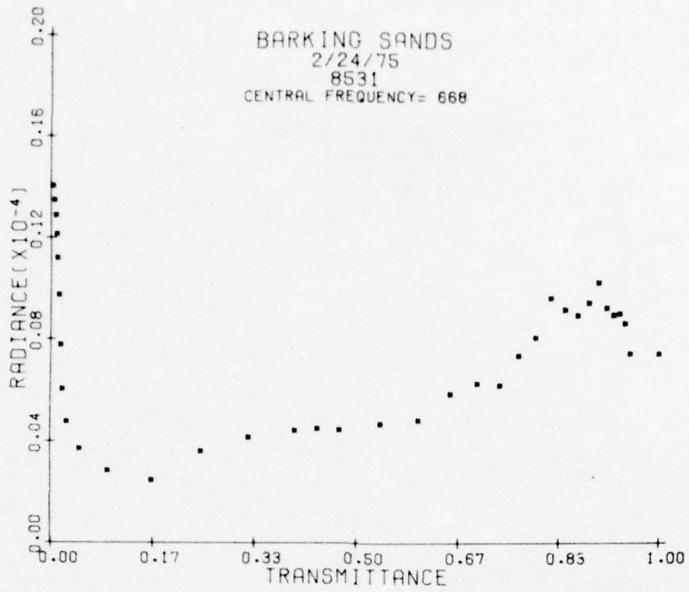


Figure 8. Examples of Actual Functions Involved in the Numerical Quadrature Leading to the Computed Radiances Presented in Table 4 for 2 Channels and the Barking Sands Comparison of 24 February 1975. Central Frequency Equals 668

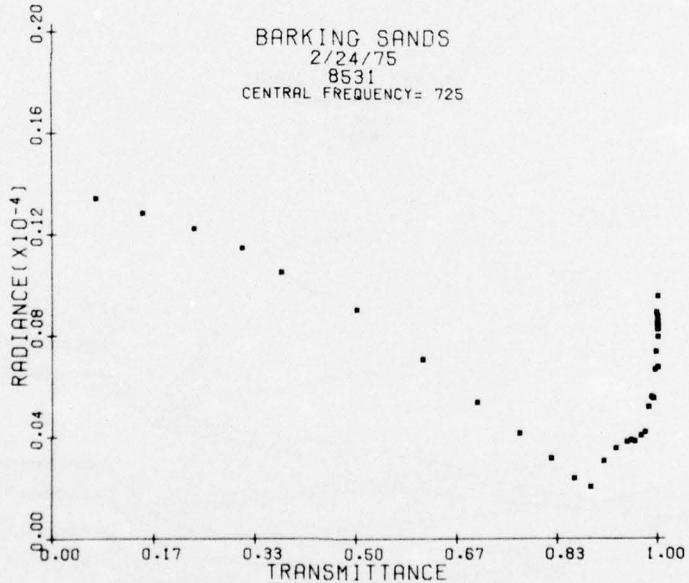


Figure 9. Examples of Actual Functions Involved in the Numerical Quadrature Leading to the Computed Radiances Presented in Table 4 for 2 Channels and the Barking Sands Comparison of 24 February 1975. Central Frequency Equals 725

Table 1. Atmospheric Definitions Based on Radiosonde and Rocketsonde Observations

PRESSURE (mb)	TEMPERATURE (K)	H ₂ O		O ₃		PRESSURE (mb)	TEMPERATURE (K)	H ₂ O		O ₃	
		MOLECULES/ CM ² SQ			MOLECULES/ CM ² SQ						
PT. MUGU 2/17/75 8531											
0.0200	251.46	0*	7*	0.000	257.37	0*	0.000	257.37	0*	0.000	0*
0.3311	251.36	0*	1.2+95+16	0.771	257.37	0*	0.771	252.60	0*	7.3+85+15	7.3+85+15
4.7077	257.69	0*	1.672+16	5.515	252.60	0*	2.115+15	5.15	0*	1.123+16	1.123+16
5.5777	262.38	0*	2.2115+15	0.9445	261.94	0*	3.035E+16	1.714+16	0*	3.340E+16	3.340E+16
7.169	266.80	0*	3.035E+16	1.7530	270.37	0*	6.876E+16	9.328E+16	0*	1.539E+17	1.539E+17
9.965	262.93	2*	4.77E+16	2.7365	270.37	0*	6.876E+16	2.7365	0*	2.513E+17	2.513E+17
1.1958	265.75	0*	6.876E+16	3.2236	263.14	0*	1.028E+17	3.2236	0*	4.015E+17	4.015E+17
1.5384	267.18	0*	1.028E+17	4.6449	257.76	0*	1.630E+17	4.6449	0*	7.638E+17	7.638E+17
1.9379	271.84	2*	1.630E+17	6.9197	239.70	0*	2.239E+17	6.9197	0*	7.5177	7.5177
2.5361	265.74	0*	2.339E+17	7.5177	240.21	0*	3.394E+17	7.5177	0*	8.352E+17	8.352E+17
3.2765	261.77	0*	3.394E+17	9.1278	246.93	0*	4.849E+17	9.1278	0*	1.114E+18	1.114E+18
4.2925	258.45	0*	6.733E+17	13.1186	229.44	0*	6.733E+17	13.1186	0*	1.731E+18	1.731E+18
5.5698	239.92	0*	9.432E+17	15.4736	226.25	0*	9.432E+17	15.4736	0*	2.071E+18	2.071E+18
7.4168	245.77	0*	1.372E+18	22.5149	220.24	0*	1.372E+18	22.5149	0*	3.501E+18	3.501E+18
9.9769	227.89	2*	1.760E+18	35.4040	216.55	0*	2.230E+18	35.4040	0*	4.228E+18	4.228E+18
12.4219	220.39	0*	2.353E+18	50.0200	219.75	0*	2.353E+18	50.0200	0*	4.946E+18	4.946E+18
18.2290	218.44	0*	3.163E+18	75.9005	211.45	0*	3.163E+18	75.9005	0*	2.436E+18	2.436E+18
24.8911	214.45	0*	4.786E+18	100.0002	199.75	0*	4.786E+18	100.0002	0*	5.60E+18	5.60E+18
34.9364	213.43	0*	5.135E+18	150.0005	211.75	0*	5.135E+18	150.0005	0*	5.643E+18	5.643E+18
46.1964	211.79	0*	5.703E+18	175.0000	217.75	0*	5.703E+18	175.0000	0*	5.695E+18	5.695E+18
55.2942	211.75	0*	6.756E+18	250.0000	270.15	0*	6.756E+18	250.0000	0*	5.995E+18	5.995E+18
75.8900	211.45	0*	7.756E+18	400.0000	243.15	0*	7.756E+18	400.0000	0*	6.10E+18	6.10E+18
114.3400	215.25	0*	8.669E+18	500.0000	260.95	0*	8.669E+18	500.0000	0*	6.27E+18	6.27E+18
143.0200	215.15	0*	9.332E+18	700.2000	279.75	0*	9.332E+18	700.2000	0*	6.43E+18	6.43E+18
196.3105	215.15	0*	9.939E+18	800.0000	283.55	0*	9.939E+18	800.0000	0*	6.76E+18	6.76E+18
269.1709	214.95	0*	1.000E+19	900.0000	287.35	0*	1.000E+19	900.0000	0*	6.59E+18	6.59E+18
317.4000	228.65	0*	1.132E+19	950.0000	290.75	0*	1.132E+19	950.0000	0*	6.79E+18	6.79E+18
362.4500	216.45	2*	1.222E+19	1000.0000	295.25	0*	1.022E+19	1000.0000	0*	6.61E+18	6.61E+18
418.3700	244.75	3*	1.305E+20	1020.0000	297.55	0*	1.031E+19	1020.0000	0*	6.011E+18	6.011E+18
479.5500	250.45	2*	1.479E+21	1.038E+19	1.038E+19	0*	1.911E+21	1.038E+19	2*	7.307E+22	7.307E+22
548.4400	258.25	3*	1.911E+21	1.038E+19	1.038E+19	0*	2.936E+21	1.038E+19	2*	1.04E+19	1.04E+19
624.5760	255.45	2*	5.936E+21	6.71E+21	1.051E+19	0*	6.49E+21	6.71E+21	2*	1.49E+19	1.49E+19
709.6500	272.25	0*	7.49E+21	8.49E+21	1.057E+19	0*	8.49E+21	8.49E+21	0*	1.283E+19	1.283E+19
802.9800	281.15	0*	1.283E+22	1.038E+22	1.053E+19	0*	1.038E+22	1.038E+22	0*	1.038E+19	1.038E+19
907.4600	281.55	2*	1.283E+22	2.318E+22	1.053E+19	0*	2.318E+22	2.318E+22	2*	1.038E+19	1.038E+19
1022.7700	246.35	0*	2.318E+22	2.318E+22	1.053E+19	0*	2.318E+22	2.318E+22	2*	1.038E+19	1.038E+19

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Table 1. (Cont)

PRESSURE (kPa)	TEMPERATURE (K)	H ₂ O MOLECULES / CM ⁻²			PRESSURE (kPa)	TEMPERATURE (K)	H ₂ O MOLECULES / CM ⁻²		
		0 ³	SO	0 ³ MOLECULES / CM ⁻²			0 ³	SO	0 ³ MOLECULES / CM ⁻²
0.0000	248.70	0.		8.913E+15	0.0000	247.77	0.		0.
0.1126	248.70	0.		2.27E+15	0.224	247.73	0.		5.995E+15
0.3144	263.57	0.		1.62E+16	2.898	257.40	0.		8.277E+15
0.6161	269.13	0.		1.97E+16	3.751	260.35	0.		1.116E+16
1.0136	272.02	0.		4.46E+16	4.853	259.97	0.		1.400E+16
1.5088	272.57	0.		7.09E+16	6.267	262.55	0.		1.900E+16
2.0655	260.17	0.		1.45E+17	8.067	269.77	0.		2.59E+16
2.5299	253.71	0.		2.93E+17	1.076	263.47	0.		3.956E+16
3.1477	241.11	0.		5.09E+17	1.360	259.75	0.		5.974E+16
6.7961	242.22	0.		7.45E+17	1.774	261.45	0.		9.140E+16
10.8153	234.83	0.		1.37E+18	2.242	264.39	0.		1.441E+17
16.2479	229.36	0.		2.12E+18	2.906	252.74	0.		2.133E+17
26.8219	227.17	0.		3.49E+18	3.934	246.44	0.		3.296E+17
37.7705	215.39	0.		4.38E+18	5.026	236.55	0.		4.929E+17
59.0702	203.25	0.		4.96E+18	6.571	237.79	0.		7.222E+17
70.0000	202.45	0.		5.46E+18	8.892	233.28	0.		1.071E+18
100.0000	192.15	0.		5.66E+18	11.965	223.02	0.		1.566E+18
179.1702	215.14	0.		5.87E+18	15.210	221.43	0.		2.165E+18
201.3900	243.32	0.		5.42E+20	22.075	218.42	0.		2.636E+18
400.1900	260.73	0.		6.659E+18	25.604	219.74	0.		3.374E+18
500.3700	268.71	0.		5.292E+21	30.020	218.55	0.		3.010E+18
616.9402	279.46	0.		1.048E+22	40.900	215.45	0.		4.055E+18
750.1700	248.44	0.		2.181E+22	56.370	203.15	0.		5.633E+18
800.8502	230.11	0.		2.681E+22	78.750	199.75	0.		5.738E+18
852.1600	290.74	0.		3.773E+22	111.400	199.35	0.		5.211E+18
903.7000	232.70	0.		5.401E+22	155.300	210.45	0.		5.0255E+18
956.6201	295.59	0.		7.556E+22	212.500	222.45	0.		6.415E+18
984.2700	298.50	0.		8.874E+22	295.400	235.15	0.		5.3372E+18
1011.9000	312.21	0.		1.022E+23	377.660	250.15	0.		6.012E+18
					493.200	265.45	0.		6.241E+18
					633.800	275.45	0.		6.364E+18
					715.900	281.05	0.		6.255E+18
					805.900	286.75	0.		6.405E+18
					907.700	291.55	0.		6.451E+18
					1019.000	294.35	0.		6.551E+18
						2.265E+22			6.551E+18

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Table 1. (Cont)

MATING SANDS 2/26/75 8531		KWAJALEIN 2/27/75 9532	
PRESSURE (Mpa)	TEMPERATURE (K)	H ₂ O MOLECULES/ CM ³	O ₃ MOLECULES/ CM ³
PRESSURE (Mpa)	TEMPERATURE (K)	H ₂ O MOLECULES/ CM ³	O ₃ MOLECULES/ CM ³
0.0000	259.51	0.	0.
0.3087	259.51	8.93E+15	249.45
0.5000	259.40	1.519E+16	249.62
0.7000	264.50	2.21E+16	253.65
1.0000	264.66	3.719E+16	269.73
2.0000	261.20	1.195E+17	270.77
2.0000	236.56	8.93E+17	270.41
10.0000	228.59	1.22E+18	262.91
25.0000	221.84	6.205E+18	250.96
75.0000	216.22	3.813E+18	237.12
165.6224	216.27	4.326E+18	232.48
46.0000	210.15	4.54E+18	220.72
70.0000	198.15	4.96E+18	204.70
100.0000	196.45	5.63E+18	216.49
150.0000	208.15	5.813E+18	209.11
200.0000	219.35	5.915E+18	190.00
300.0000	238.55	6.057E+18	199.20
350.0000	245.15	6.112E+18	226.29
400.0000	252.95	6.140E+18	231.16
450.0000	260.55	6.214E+18	237.77
500.0000	266.45	6.227E+18	241.53
550.0000	271.15	6.231E+18	232.40
600.0000	273.75	6.327E+18	248.14
650.0000	276.35	6.362E+18	252.97
700.0000	276.35	6.362E+18	226.21
750.0000	246.45	4.031E+20	405.53
810.0000	242.95	6.176E+20	478.10
860.0000	247.25	8.652E+20	509.40
910.0000	249.25	1.641E+21	550.77
960.0000	249.25	1.820E+21	613.90
1010.0000	247.35	6.511E+18	613.91
1060.0000	247.35	2.155E+21	245.44
1110.0000	245.75	5.129E+21	787.20
1160.0000	246.45	4.295E+22	481.70
1210.0000	243.35	3.057E+22	651.80
1260.0000	246.65	5.242E+22	877.10
1310.0000	242.35	5.684E+22	291.18
1360.0000	292.35	6.616E+19	912.90
1410.0000	297.35	2.155E+21	291.29
1460.0000	297.35	6.525E+21	296.15
1510.0000	246.15	6.545E+18	296.90
1560.0000	246.15	6.579E+18	249.58
1610.0000	243.35	6.616E+18	291.18
1660.0000	249.25	6.616E+18	291.18
1710.0000	249.25	6.616E+18	291.18
1760.0000	249.25	6.616E+18	291.18
1810.0000	249.25	6.616E+18	291.18
1860.0000	249.25	6.616E+18	291.18
1910.0000	249.25	6.616E+18	291.18
1960.0000	249.25	6.616E+18	291.18
2010.0000	249.25	6.616E+18	291.18
2060.0000	249.25	6.616E+18	291.18
2110.0000	249.25	6.616E+18	291.18
2160.0000	249.25	6.616E+18	291.18
2210.0000	249.25	6.616E+18	291.18
2260.0000	249.25	6.616E+18	291.18
2310.0000	249.25	6.616E+18	291.18
2360.0000	249.25	6.616E+18	291.18
2410.0000	249.25	6.616E+18	291.18
2460.0000	249.25	6.616E+18	291.18
2510.0000	249.25	6.616E+18	291.18
2560.0000	249.25	6.616E+18	291.18
2610.0000	249.25	6.616E+18	291.18
2660.0000	249.25	6.616E+18	291.18
2710.0000	249.25	6.616E+18	291.18
2760.0000	249.25	6.616E+18	291.18
2810.0000	249.25	6.616E+18	291.18
2860.0000	249.25	6.616E+18	291.18
2910.0000	249.25	6.616E+18	291.18
2960.0000	249.25	6.616E+18	291.18
3010.0000	249.25	6.616E+18	291.18
3060.0000	249.25	6.616E+18	291.18
3110.0000	249.25	6.616E+18	291.18
3160.0000	249.25	6.616E+18	291.18
3210.0000	249.25	6.616E+18	291.18
3260.0000	249.25	6.616E+18	291.18
3310.0000	249.25	6.616E+18	291.18
3360.0000	249.25	6.616E+18	291.18
3410.0000	249.25	6.616E+18	291.18
3460.0000	249.25	6.616E+18	291.18
3510.0000	249.25	6.616E+18	291.18
3560.0000	249.25	6.616E+18	291.18
3610.0000	249.25	6.616E+18	291.18
3660.0000	249.25	6.616E+18	291.18
3710.0000	249.25	6.616E+18	291.18
3760.0000	249.25	6.616E+18	291.18
3810.0000	249.25	6.616E+18	291.18
3860.0000	249.25	6.616E+18	291.18
3910.0000	249.25	6.616E+18	291.18
3960.0000	249.25	6.616E+18	291.18
4010.0000	249.25	6.616E+18	291.18
4060.0000	249.25	6.616E+18	291.18
4110.0000	249.25	6.616E+18	291.18
4160.0000	249.25	6.616E+18	291.18
4210.0000	249.25	6.616E+18	291.18
4260.0000	249.25	6.616E+18	291.18
4310.0000	249.25	6.616E+18	291.18
4360.0000	249.25	6.616E+18	291.18
4410.0000	249.25	6.616E+18	291.18
4460.0000	249.25	6.616E+18	291.18
4510.0000	249.25	6.616E+18	291.18
4560.0000	249.25	6.616E+18	291.18
4610.0000	249.25	6.616E+18	291.18
4660.0000	249.25	6.616E+18	291.18
4710.0000	249.25	6.616E+18	291.18
4760.0000	249.25	6.616E+18	291.18
4810.0000	249.25	6.616E+18	291.18
4860.0000	249.25	6.616E+18	291.18
4910.0000	249.25	6.616E+18	291.18
4960.0000	249.25	6.616E+18	291.18
5010.0000	249.25	6.616E+18	291.18
5060.0000	249.25	6.616E+18	291.18
5110.0000	249.25	6.616E+18	291.18
5160.0000	249.25	6.616E+18	291.18
5210.0000	249.25	6.616E+18	291.18
5260.0000	249.25	6.616E+18	291.18
5310.0000	249.25	6.616E+18	291.18
5360.0000	249.25	6.616E+18	291.18
5410.0000	249.25	6.616E+18	291.18
5460.0000	249.25	6.616E+18	291.18
5510.0000	249.25	6.616E+18	291.18
5560.0000	249.25	6.616E+18	291.18
5610.0000	249.25	6.616E+18	291.18
5660.0000	249.25	6.616E+18	291.18
5710.0000	249.25	6.616E+18	291.18
5760.0000	249.25	6.616E+18	291.18
5810.0000	249.25	6.616E+18	291.18
5860.0000	249.25	6.616E+18	291.18
5910.0000	249.25	6.616E+18	291.18
5960.0000	249.25	6.616E+18	291.18
6010.0000	249.25	6.616E+18	291.18
6060.0000	249.25	6.616E+18	291.18
6110.0000	249.25	6.616E+18	291.18
6160.0000	249.25	6.616E+18	291.18
6210.0000	249.25	6.616E+18	291.18
6260.0000	249.25	6.616E+18	291.18
6310.0000	249.25	6.616E+18	291.18
6360.0000	249.25	6.616E+18	291.18
6410.0000	249.25	6.616E+18	291.18
6460.0000	249.25	6.616E+18	291.18
6510.0000	249.25	6.616E+18	291.18
6560.0000	249.25	6.616E+18	291.18
6610.0000	249.25	6.616E+18	291.18
6660.0000	249.25	6.616E+18	291.18
6710.0000	249.25	6.616E+18	291.18
6760.0000	249.25	6.616E+18	291.18
6810.0000	249.25	6.616E+18	291.18
6860.0000	249.25	6.616E+18	291.18
6910.0000	249.25	6.616E+18	291.18
6960.0000	249.25	6.616E+18	291.18
7010.0000	249.25	6.616E+18	291.18
7060.0000	249.25	6.616E+18	291.18
7110.0000	249.25	6.616E+18	291.18
7160.0000	249.25	6.616E+18	291.18
7210.0000	249.25	6.616E+18	291.18
7260.0000	249.25	6.616E+18	291.18
7310.0000	249.25	6.616E+18	291.18
7360.0000	249.25	6.616E+18	291.18
7410.0000	249.25	6.616E+18	291.18
7460.0000	249.25	6.616E+18	291.18
7510.0000	249.25	6.616E+18	291.18
7560.0000	249.25	6.616E+18	291.18
7610.0000	249.25	6.616E+18	291.18
7660.0000	249.25	6.616E+18	291.18
7710.0000	249.25	6.616E+18	291.18
7760.0000	249.25	6.616E+18	291.18
7810.0000	249.25	6.616E+18	291.18
7860.0000	249.25	6.616E+18	291.18
7910.0000	249.25	6.616E+18	291.18
7960.0000	249.25	6.616E+18	291.18
8010.0000	249.25	6.616E+18	291.18
8060.0000	249.25	6.616E+18	291.18
8110.0000	249.25	6.616E+18	291.18
8160.0000	249.25	6.616E+18	291.18
8210.0000	249.25	6.616E+18	291.18
8260.0000	249.25	6.616E+18	291.18
8310.0000	249.25	6.616E+18	291.18
8360.0000	249.25	6.616E+18	291.18
8410.0000	249.25	6.616E+18	291.18
8460.0000	249.25	6.616E+18	291.18
8510.0000	249.25	6.616E+18	291.18
8560.0000	249.25	6.616E+18	291.18
8610.0000	249.25	6.616E+18	291.18
8660.0000	249.25	6.616E+18	291.18
8710.0000	249.25	6.616E+18	291.18
8760.0000	249.25	6.616E+18	291.18
8810.0000	249.25	6.616E+18	291.18
8860.0000	249.25	6.616E+18	291.18
8910.0000	249.25	6.616E+18	291.18
8960.0000	249.25	6.616E+18	291.18
9010.0000	249.25	6.616E+18	291.18
9060.0000	249.25	6.616E+18	291.18
9110.0000	249.25	6.616E+18	291.18
9160.0000	249.25	6.616E+18	291.18
9210.0000	249.25	6.616E+18	291.18
9260.0000	249.25	6.616E+18	291.18
9310.0000	249.25	6.616E+18	291.18
9360.0000	249.25	6.616E+18	291.18

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Table 1. (Cont)

PRESSURE (mb)	TEMPERATURE (K)	H ₂ O MOLECULES/ CM ⁻²		C ₃ MOLECULES/ CM ⁻²	H ₂ O MOLECULES/ CM ⁻²	TEMPERATURE (K)	H ₂ O MOLECULES/ CM ⁻²	C ₃ MOLECULES/ CM ⁻²
		CM SD	CM SQ					
0.0000	253.39	0.	0.	0.	0.	251.42	0.	0.
0.3087	253.99	0.	0.	0.	0.	251.42	0.	0.
0.4000	262.61	1.21E+15	1.21E+15	1.30	1.30	247.98	0.	0.
0.5054	265.29	1.82E+16	1.82E+16	7059	7059	255.80	0.	0.
0.6645	264.64	2.06E+16	2.06E+16	254.94	254.94	267.05	0.	0.
0.9574	264.26	2.71E+16	2.71E+16	763F	763F	267.05	0.	0.
1.1142	249.16	4.49E+16	4.49E+16	1.2034	1.2034	275.99	0.	0.
1.6674	261.14	8.35E+16	8.35E+16	2.0054	2.0054	252.73	0.	0.
2.9417	239.64	2.04E+17	2.04E+17	7.0012	7.0012	256.79	0.	0.
4.2986	245.52	3.93E+17	3.93E+17	4.479n	4.479n	244.22	0.	0.
7.6233	228.57	8.746E+17	8.746E+17	5.327	5.327	237.06	0.	0.
11.8875	225.73	1.535E+19	1.535E+19	7.9767	7.9767	235.16	0.	0.
16.0428	222.70	2.04E+18	2.04E+18	10.6346	10.6346	233.13	0.	0.
21.7975	218.52	2.63E+18	2.63E+18	12.2347	12.2347	231.44	0.	0.
30.1232	217.55	3.43E+18	3.43E+18	14.2242	14.2242	227.25	0.	0.
40.0000	215.15	4.54E+18	4.54E+18	16.517F	16.517F	221.60	0.	0.
50.0000	211.15	4.96E+18	4.96E+18	19.310C	19.310C	227.23	0.	0.
70.0000	201.15	5.426E+18	5.426E+18	22.500n	22.500n	224.55	0.	0.
100.0000	200.35	5.64E+18	5.64E+18	26.500n	26.500n	225.41	0.	0.
150.0000	209.75	5.813E+18	5.813E+18	30.340C	30.340C	223.92	0.	0.
210.0000	215.25	5.63E+18	5.63E+18	35.420C	35.420C	215.14	0.	0.
270.0000	219.75	5.952E+18	5.952E+18	41.470C	41.470C	214.59	0.	0.
350.0000	224.15	5.958E+18	5.958E+18	49.550C	49.550C	215.97	0.	0.
370.0000	234.15	6.07E+18	6.07E+18	57.350C	57.350C	217.24	0.	0.
400.0000	251.75	2.462E+20	2.462E+20	67.500	67.500	198.60	0.	0.
500.0000	262.75	1.075E+21	1.075E+21	80.180n	80.180n	191.53	0.	0.
600.0000	271.85	2.443E+21	2.443E+21	95.450n	95.450n	189.43	0.	0.
650.0000	275.75	3.192E+21	3.192E+21	114.2800	114.2800	195.58	0.	0.
700.0000	277.75	3.761E+21	3.761E+21	135.4300	135.4300	212.51	0.	0.
750.0000	279.35	5.427E+21	5.427E+21	159.400n	159.400n	203.75	0.	0.
800.0000	293.25	8.169E+21	8.169E+21	197.100n	197.100n	217.73	0.	0.
850.0000	295.55	1.348E+22	1.348E+22	218.220n	218.220n	226.53	0.	0.
900.0000	297.25	2.446E+22	2.446E+22	252.700	252.700	216.65	0.	0.
950.0000	299.45	3.926E+22	3.926E+22	291.500n	291.500n	240.72	0.	0.
1000.0000	294.25	5.567E+22	5.567E+22	334.920n	334.920n	243.21	2.995E+20	0.
1022.0000	297.45	6.392E+22	6.392E+22	382.800n	382.800n	255.04	2.988E+20	0.
				436.070n	436.070n	262.96	1.172E+21	0.
				495.150n	495.150n	261.79	3.415E+21	0.
				561.000n	561.000n	276.73	5.121E+21	0.
				633.410n	633.410n	241.07	9.015E+21	0.
				714.670n	714.670n	245.14	1.381E+22	0.
				804.400n	804.400n	287.47	3.695E+22	0.
				903.800n	903.800n	233.92	7.113E+22	0.
				1011.910n	1011.910n	270.64	1.286E+23	0.

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Table 1. (Cont)

PRESSURE (MB)	TEMPERATURE (K)	H ₂ O MOLECULES/ CM ³	H ₂ O MOLECULES/ CM ³ SQ	H ₂ O MOLECULES/ CM ³ SQ
0.0000	249.94	0.	0.	0.93E+15
.1124	242.67	0.	0.	2.20E+15
.2176	254.37	0.	0.	5.82E+15
.6664	267.78	0.	0.	2.13E+16
.8625	262.07	0.	0.	2.75E+16
1.9453	271.75	0.	0.	1.13E+17
3.3752	257.59	0.	0.	2.74E+17
6.1261	238.71	0.	0.	6.28E+17
15.1E30	230.44	0.	0.	1.95E+18
26.2E57	218.20	0.	0.	3.64E+18
51.7E90	205.14	0.	0.	5.19E+18
75.7E300	190.71	0.	0.	5.52E+18
103.3E500	191.17	0.	0.	5.68E+18
120.4E600	197.02	0.	0.	5.79E+18
200.9E600	221.19	0.	0.	5.96E+18
240.5E100	235.12	0.	0.	5.91E+18
300.1E60	244.21	2.117E+20	0.	6.07E+18
380.6E400	255.45	1.035E+21	0.	6.13E+18
463.0E700	265.51	2.687E+21	0.	6.24E+18
54.2E700	273.13	5.559E+21	0.	6.33E+18
61.1E300	280.12	8.909E+21	0.	6.37E+18
691.7E8	282.92	1.345E+22	0.	6.37E+18
75.7E500	247.22	1.837E+22	0.	6.44E+18
802.4E900	245.75	2.672E+22	0.	6.47E+18
851.0E600	290.41	4.226E+22	0.	6.12E+18
87.1E800	290.77	5.154E+22	0.	6.13E+18
901.9E900	291.58	6.157E+22	0.	6.13E+18
920.4E300	293.44	7.329E+22	0.	6.15E+18
955.4E200	295.9	9.644E+22	0.	6.582E+18
1010.6E600	302.29	1.151E+23	0.	6.617E+18

Table 2a. Filter Functions for the Block 5C 8531 Satellite

DMSP FILTER NO. 1531
668 MAX NUMBER CHANNEL
FREQUENCY STEP IS VARIABLE

FREQUENCY	FILTER TRANSMISSION	FREQUENCY		FREQUENCY		FREQUENCY	
		FILTERED TRANSMISSION	FREQUENCY	FILTERED TRANSMISSION	FREQUENCY	FILTERED TRANSMISSION	FREQUENCY
659.60	*0.45	663.60	*0.01	671.00	*1.30	678.60	*0.94
659.61	*0.45	663.61	*0.71	671.01	*1.50	678.61	*0.94
659.62	*0.55	663.62	*0.80	671.02	*1.55	678.62	*0.96
659.63	*0.50	663.63	*0.90	671.03	*1.70	678.63	*0.95
659.64	*0.50	663.64	*1.02	671.04	*1.75	678.64	*0.95
659.65	*0.50	663.65	*1.12	671.05	*1.80	678.65	*0.94
659.66	*0.75	663.66	*1.15	671.06	*1.90	678.66	*0.97
659.67	*0.45	663.67	*1.20	671.07	*1.92	678.67	*0.94
659.68	*0.45	663.68	*1.25	671.08	*1.95	678.68	*0.94
659.69	*0.45	663.69	*1.30	671.09	*1.98	678.69	*0.94
659.70	*0.45	663.70	*1.35	671.10	*2.00	678.70	*0.94
659.71	*0.45	663.71	*1.40	671.11	*2.05	678.71	*0.94
659.72	*0.45	663.72	*1.45	671.12	*2.10	678.72	*0.94
659.73	*0.45	663.73	*1.50	671.13	*2.15	678.73	*0.94
659.74	*0.45	663.74	*1.55	671.14	*2.20	678.74	*0.94
659.75	*0.45	663.75	*1.60	671.15	*2.25	678.75	*0.94
659.76	*0.45	663.76	*1.65	671.16	*2.30	678.76	*0.94
659.77	*0.45	663.77	*1.70	671.17	*2.35	678.77	*0.94
659.78	*0.45	663.78	*1.75	671.18	*2.40	678.78	*0.94
659.79	*0.45	663.79	*1.80	671.19	*2.45	678.79	*0.94
659.80	*0.45	663.80	*1.85	671.20	*2.50	678.80	*0.94
659.81	*0.45	663.81	*1.90	671.21	*2.55	678.81	*0.94
659.82	*0.45	663.82	*1.95	671.22	*2.60	678.82	*0.94
659.83	*0.45	663.83	*2.00	671.23	*2.65	678.83	*0.94
659.84	*0.45	663.84	*2.05	671.24	*2.70	678.84	*0.94
659.85	*0.45	663.85	*2.10	671.25	*2.75	678.85	*0.94
659.86	*0.45	663.86	*2.15	671.26	*2.80	678.86	*0.94
659.87	*0.45	663.87	*2.20	671.27	*2.85	678.87	*0.94
659.88	*0.45	663.88	*2.25	671.28	*2.90	678.88	*0.94
659.89	*0.45	663.89	*2.30	671.29	*2.95	678.89	*0.94
659.90	*0.45	663.90	*2.35	671.30	*3.00	678.90	*0.94
659.91	*0.45	663.91	*2.40	671.31	*3.05	678.91	*0.94
659.92	*0.45	663.92	*2.45	671.32	*3.10	678.92	*0.94
659.93	*0.45	663.93	*2.50	671.33	*3.15	678.93	*0.94
659.94	*0.45	663.94	*2.55	671.34	*3.20	678.94	*0.94
659.95	*0.45	663.95	*2.60	671.35	*3.25	678.95	*0.94
659.96	*0.45	663.96	*2.65	671.36	*3.30	678.96	*0.94
659.97	*0.45	663.97	*2.70	671.37	*3.35	678.97	*0.94
659.98	*0.45	663.98	*2.75	671.38	*3.40	678.98	*0.94
659.99	*0.45	663.99	*2.80	671.39	*3.45	678.99	*0.94
660.00	*0.45	664.00	*2.85	671.40	*3.50	679.00	*0.94
660.01	*0.45	664.01	*2.90	671.41	*3.55	679.01	*0.94
660.02	*0.45	664.02	*2.95	671.42	*3.60	679.02	*0.94
660.03	*0.45	664.03	*3.00	671.43	*3.65	679.03	*0.94
660.04	*0.45	664.04	*3.05	671.44	*3.70	679.04	*0.94
660.05	*0.45	664.05	*3.10	671.45	*3.75	679.05	*0.94
660.06	*0.45	664.06	*3.15	671.46	*3.80	679.06	*0.94
660.07	*0.45	664.07	*3.20	671.47	*3.85	679.07	*0.94
660.08	*0.45	664.08	*3.25	671.48	*3.90	679.08	*0.94
660.09	*0.45	664.09	*3.30	671.49	*3.95	679.09	*0.94
660.10	*0.45	664.10	*3.35	671.50	*4.00	679.10	*0.94
660.11	*0.45	664.11	*3.40	671.51	*4.05	679.11	*0.94
660.12	*0.45	664.12	*3.45	671.52	*4.10	679.12	*0.94
660.13	*0.45	664.13	*3.50	671.53	*4.15	679.13	*0.94
660.14	*0.45	664.14	*3.55	671.54	*4.20	679.14	*0.94
660.15	*0.45	664.15	*3.60	671.55	*4.25	679.15	*0.94
660.16	*0.45	664.16	*3.65	671.56	*4.30	679.16	*0.94
660.17	*0.45	664.17	*3.70	671.57	*4.35	679.17	*0.94
660.18	*0.45	664.18	*3.75	671.58	*4.40	679.18	*0.94
660.19	*0.45	664.19	*3.80	671.59	*4.45	679.19	*0.94
660.20	*0.45	664.20	*3.85	671.60	*4.50	679.20	*0.94
660.21	*0.45	664.21	*3.90	671.61	*4.55	679.21	*0.94
660.22	*0.45	664.22	*3.95	671.62	*4.60	679.22	*0.94
660.23	*0.45	664.23	*4.00	671.63	*4.65	679.23	*0.94
660.24	*0.45	664.24	*4.05	671.64	*4.70	679.24	*0.94
660.25	*0.45	664.25	*4.10	671.65	*4.75	679.25	*0.94
660.26	*0.45	664.26	*4.15	671.66	*4.80	679.26	*0.94
660.27	*0.45	664.27	*4.20	671.67	*4.85	679.27	*0.94
660.28	*0.45	664.28	*4.25	671.68	*4.90	679.28	*0.94
660.29	*0.45	664.29	*4.30	671.69	*4.95	679.29	*0.94
660.30	*0.45	664.30	*4.35	671.70	*5.00	679.30	*0.94
660.31	*0.45	664.31	*4.40	671.71	*5.05	679.31	*0.94
660.32	*0.45	664.32	*4.45	671.72	*5.10	679.32	*0.94
660.33	*0.45	664.33	*4.50	671.73	*5.15	679.33	*0.94
660.34	*0.45	664.34	*4.55	671.74	*5.20	679.34	*0.94
660.35	*0.45	664.35	*4.60	671.75	*5.25	679.35	*0.94
660.36	*0.45	664.36	*4.65	671.76	*5.30	679.36	*0.94
660.37	*0.45	664.37	*4.70	671.77	*5.35	679.37	*0.94
660.38	*0.45	664.38	*4.75	671.78	*5.40	679.38	*0.94
660.39	*0.45	664.39	*4.80	671.79	*5.45	679.39	*0.94
660.40	*0.45	664.40	*4.85	671.80	*5.50	679.40	*0.94
660.41	*0.45	664.41	*4.90	671.81	*5.55	679.41	*0.94
660.42	*0.45	664.42	*4.95	671.82	*5.60	679.42	*0.94
660.43	*0.45	664.43	*5.00	671.83	*5.65	679.43	*0.94
660.44	*0.45	664.44	*5.05	671.84	*5.70	679.44	*0.94
660.45	*0.45	664.45	*5.10	671.85	*5.75	679.45	*0.94
660.46	*0.45	664.46	*5.15	671.86	*5.80	679.46	*0.94
660.47	*0.45	664.47	*5.20	671.87	*5.85	679.47	*0.94
660.48	*0.45	664.48	*5.25	671.88	*5.90	679.48	*0.94
660.49	*0.45	664.49	*5.30	671.89	*5.95	679.49	*0.94
660.50	*0.45	664.50	*5.35	671.90	*6.00	679.50	*0.94
660.51	*0.45	664.51	*5.40	671.91	*6.05	679.51	*0.94
660.52	*0.45	664.52	*5.45	671.92	*6.10	679.52	*0.94
660.53	*0.45	664.53	*5.50	671.93	*6.15	679.53	*0.94
660.54	*0.45	664.54	*5.55	671.94	*6.20	679.54	*0.94
660.55	*0.45	664.55	*5.60	671.95	*6.25	679.55	*0.94
660.56	*0.45	664.56	*5.65	671.96	*6.30	679.56	*0.94
660.57	*0.45	664.57	*5.70	671.97	*6.35	679.57	*0.94
660.58	*0.45	664.58	*5.75	671.98	*6.40	679.58	*0.94
660.59	*0.45	664.59	*5.80	671.99	*6.45	679.59	*0.94
660.60	*0.45	664.60	*5.85	672.00	*6.50	679.60	*0.94
660.61	*0.45	664.61	*5.90	672.01	*6.55	679.61	*0.94
660.62	*0.45	664.62	*5.95	672.02	*6.60	679.62	*0.94
660.63	*0.45	664.63	*6.00	672.03	*6.65	679.63	*0.94
660.64	*0.45	664.64	*6.05	672.04	*6.70	679.64	*0.94
660.65	*0.45	664.65	*6.10	672.05	*6.75	679.65	*0.94
660.66	*0.45	664.66	*6.15	672.06	*6.80	679.66	*0.94
660.67	*0.45	664.67	*6.20	672.07	*6.85	679.67	*0.94
660.68	*0.45	664.68	*6.25	672.08	*6.90	679.68	*0.94
660.69	*0.45	664.69	*6.30	672.09	*6.95	679.69	*0.94
660.70	*0.45	664.70	*6.35	672.10	*7.00	679.70	*0.94
660.71	*0.45	664.71	*6.40	672.11	*7.05	679.71	*0.94
660.72	*0.45	664.72	*6.45	672.12	*7.10	679.72	*0.94
660.73	*0.45	664.73	*6.50	672.13	*7.15	679.73	*0.94
660.74	*0.45	664.74	*6.55	672.14	*7.20	679.74	*0.94
660.75	*0.45	664.75	*6.60	672.15	*7.25	679.75	*0.94
660.76	*0.45	664.76	*6.65	672.16	*7.30	679.76	*0.94
660.77	*0.45	664.77	*6.70	672.17	*7.35	679.77	*0.94
660.78	*0.45	664.78	*6.75	672.18	*7.40	679.78	*0.94
660.79	*0.45	664.79	*6.80	672.19	*7.45	679.79	*0.94
660.80	*0.45	664.80	*6.85	672.20	*7.50	679.80	*0.94
660.81	*0.45	664.81	*6.90	672.21	*7.55	679.81	*0.94
660.82	*0.45	664.82	*6.95	672.22	*7.60	679.82	*0.94
660.83	*0.45	664.83	*7.00	672.23	*7.65	679.83	*0.94
660.84	*0.45	664.84	*7.05	672.24	*7.70	679.84	*0.94
660.85	*0.45	664.85	*7.10	672.25	*7.75	679.85	*0.94
660.86	*0.45	664.86	*7.15	672.26	*7.80	679.86	*0.94
660.87	*0.45	664.87	*7.20	672.27	*7.85	679.87	*0.94

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Table 2a. (Cont)

FREQUENCY	TRANSMISSION	FREQUENCY	TRANSMISSION	FILTER		TRANSMISSION	FREQUENCY	TRANSMISSION	FREQUENCY	TRANSMISSION
				FILTER	FILTER					
6.11.0	0.0000	676.50	*295.0	6.62.0	0.0010	699.50	*610.0	7.00.00	7.00.00	*500.0
6.11.5	0.0005	676.00	*317.0	6.62.5	0.0015	698.50	*700.50	*330.0	*330.0	*330.0
6.12.0	0.0010	679.50	*573.0	6.63.0	0.0020	700.50	*700.50	*330.0	*330.0	*330.0
6.12.5	0.0015	680.00	*65.0	6.63.5	0.0025	701.0	*701.0	*330.0	*330.0	*330.0
6.13.0	0.0020	680.50	*547.0	6.64.0	0.0030	701.50	*701.50	*220.0	*220.0	*220.0
6.13.5	0.0025	681.00	*537.0	6.64.5	0.0035	712.0	*712.0	*162.0	*162.0	*162.0
6.14.0	0.0030	681.50	*522.0	6.65.0	0.0040	712.50	*712.50	*115.0	*115.0	*115.0
6.14.5	0.0035	682.00	*468.0	6.65.5	0.0045	713.0	*713.0	*93.0	*93.0	*93.0
6.15.0	0.0040	682.50	*404.0	6.66.0	0.0050	713.50	*713.50	*65.0	*65.0	*65.0
6.15.5	0.0045	683.00	*333.0	6.66.5	0.0055	714.0	*714.0	*40.0	*40.0	*40.0
6.16.0	0.0050	683.50	*257.0	6.67.0	0.0060	714.50	*714.50	*25.0	*25.0	*25.0
6.16.5	0.0055	684.00	*233.0	6.67.5	0.0065	715.0	*715.0	*12.0	*12.0	*12.0
6.17.0	0.0060	684.50	*137.0	6.68.0	0.0070	715.50	*715.50	*6.0	*6.0	*6.0
6.17.5	0.0065	685.00	*137.0	6.68.5	0.0075	716.0	*716.0	*0.000	*0.000	*0.000
6.18.0	0.0070	685.50	*137.0	6.69.0	0.0080	716.50	*716.50	*0.000	*0.000	*0.000
6.18.5	0.0075	686.00	*137.0	6.69.5	0.0085	717.0	*717.0	*0.000	*0.000	*0.000
6.19.0	0.0080	686.50	*137.0	6.70.0	0.0090	717.50	*717.50	*0.000	*0.000	*0.000
6.19.5	0.0085	687.00	*137.0	6.70.5	0.0095	718.0	*718.0	*0.000	*0.000	*0.000
6.20.0	0.0090	687.50	*137.0	6.71.0	0.0100	718.50	*718.50	*0.000	*0.000	*0.000
6.20.5	0.0095	688.00	*137.0	6.71.5	0.0105	719.0	*719.0	*0.000	*0.000	*0.000
6.21.0	0.0100	688.50	*137.0	6.72.0	0.0110	719.50	*719.50	*0.000	*0.000	*0.000
6.21.5	0.0105	689.00	*137.0	6.72.5	0.0115	720.0	*720.0	*0.000	*0.000	*0.000
6.22.0	0.0110	689.50	*137.0	6.73.0	0.0120	720.50	*720.50	*0.000	*0.000	*0.000
6.22.5	0.0115	690.00	*137.0	6.73.5	0.0125	721.0	*721.0	*0.000	*0.000	*0.000
6.23.0	0.0120	690.50	*137.0	6.74.0	0.0130	721.50	*721.50	*0.000	*0.000	*0.000
6.23.5	0.0125	691.00	*137.0	6.74.5	0.0135	722.0	*722.0	*0.000	*0.000	*0.000
6.24.0	0.0130	691.50	*137.0	6.75.0	0.0140	722.50	*722.50	*0.000	*0.000	*0.000
6.24.5	0.0135	692.00	*137.0	6.75.5	0.0145	723.0	*723.0	*0.000	*0.000	*0.000
6.25.0	0.0140	692.50	*137.0	6.76.0	0.0150	723.50	*723.50	*0.000	*0.000	*0.000
6.25.5	0.0145	693.00	*137.0	6.76.5	0.0155	724.0	*724.0	*0.000	*0.000	*0.000
6.26.0	0.0150	693.50	*137.0	6.77.0	0.0160	724.50	*724.50	*0.000	*0.000	*0.000
6.26.5	0.0155	694.00	*137.0	6.77.5	0.0165	725.0	*725.0	*0.000	*0.000	*0.000
6.27.0	0.0160	694.50	*137.0	6.78.0	0.0170	725.50	*725.50	*0.000	*0.000	*0.000
6.27.5	0.0165	695.00	*137.0	6.78.5	0.0175	726.0	*726.0	*0.000	*0.000	*0.000
6.28.0	0.0170	695.50	*137.0	6.79.0	0.0180	726.50	*726.50	*0.000	*0.000	*0.000
6.28.5	0.0175	696.00	*137.0	6.79.5	0.0185	727.0	*727.0	*0.000	*0.000	*0.000
6.29.0	0.0180	696.50	*137.0	6.80.0	0.0190	727.50	*727.50	*0.000	*0.000	*0.000
6.29.5	0.0185	697.00	*137.0	6.80.5	0.0195	728.0	*728.0	*0.000	*0.000	*0.000
6.30.0	0.0190	697.50	*137.0	6.81.0	0.0200	728.50	*728.50	*0.000	*0.000	*0.000
6.30.5	0.0195	698.00	*137.0	6.81.5	0.0205	729.0	*729.0	*0.000	*0.000	*0.000
6.31.0	0.0200	698.50	*137.0	6.82.0	0.0210	729.50	*729.50	*0.000	*0.000	*0.000
6.31.5	0.0205	699.00	*137.0	6.82.5	0.0215	730.0	*730.0	*0.000	*0.000	*0.000
6.32.0	0.0210	699.50	*137.0	6.83.0	0.0220	730.50	*730.50	*0.000	*0.000	*0.000
6.32.5	0.0215	700.00	*137.0	6.83.5	0.0225	731.0	*731.0	*0.000	*0.000	*0.000
6.33.0	0.0220	700.50	*137.0	6.84.0	0.0230	731.50	*731.50	*0.000	*0.000	*0.000
6.33.5	0.0225	701.00	*137.0	6.84.5	0.0235	732.0	*732.0	*0.000	*0.000	*0.000
6.34.0	0.0230	701.50	*137.0	6.85.0	0.0240	732.50	*732.50	*0.000	*0.000	*0.000
6.34.5	0.0235	702.00	*137.0	6.85.5	0.0245	733.0	*733.0	*0.000	*0.000	*0.000
6.35.0	0.0240	702.50	*137.0	6.86.0	0.0250	733.50	*733.50	*0.000	*0.000	*0.000
6.35.5	0.0245	703.00	*137.0	6.86.5	0.0255	734.0	*734.0	*0.000	*0.000	*0.000
6.36.0	0.0250	703.50	*137.0	6.87.0	0.0260	734.50	*734.50	*0.000	*0.000	*0.000
6.36.5	0.0255	704.00	*137.0	6.87.5	0.0265	735.0	*735.0	*0.000	*0.000	*0.000
6.37.0	0.0260	704.50	*137.0	6.88.0	0.0270	735.50	*735.50	*0.000	*0.000	*0.000
6.37.5	0.0265	705.00	*137.0	6.88.5	0.0275	736.0	*736.0	*0.000	*0.000	*0.000
6.38.0	0.0270	705.50	*137.0	6.89.0	0.0280	736.50	*736.50	*0.000	*0.000	*0.000
6.38.5	0.0275	706.00	*137.0	6.89.5	0.0285	737.0	*737.0	*0.000	*0.000	*0.000
6.39.0	0.0280	706.50	*137.0	6.90.0	0.0290	737.50	*737.50	*0.000	*0.000	*0.000
6.39.5	0.0285	707.00	*137.0	6.90.5	0.0295	738.0	*738.0	*0.000	*0.000	*0.000
6.40.0	0.0290	707.50	*137.0	6.91.0	0.0300	738.50	*738.50	*0.000	*0.000	*0.000
6.40.5	0.0295	708.00	*137.0	6.91.5	0.0305	739.0	*739.0	*0.000	*0.000	*0.000
6.41.0	0.0300	708.50	*137.0	6.92.0	0.0310	739.50	*739.50	*0.000	*0.000	*0.000
6.41.5	0.0305	709.00	*137.0	6.92.5	0.0315	740.0	*740.0	*0.000	*0.000	*0.000
6.42.0	0.0310	709.50	*137.0	6.93.0	0.0320	740.50	*740.50	*0.000	*0.000	*0.000
6.42.5	0.0315	710.00	*137.0	6.93.5	0.0325	741.0	*741.0	*0.000	*0.000	*0.000
6.43.0	0.0320	710.50	*137.0	6.94.0	0.0330	741.50	*741.50	*0.000	*0.000	*0.000
6.43.5	0.0325	711.00	*137.0	6.94.5	0.0335	742.0	*742.0	*0.000	*0.000	*0.000
6.44.0	0.0330	711.50	*137.0	6.95.0	0.0340	742.50	*742.50	*0.000	*0.000	*0.000
6.44.5	0.0335	712.00	*137.0	6.95.5	0.0345	743.0	*743.0	*0.000	*0.000	*0.000
6.45.0	0.0340	712.50	*137.0	6.96.0	0.0350	743.50	*743.50	*0.000	*0.000	*0.000
6.45.5	0.0345	713.00	*137.0	6.96.5	0.0355	744.0	*744.0	*0.000	*0.000	*0.000
6.46.0	0.0350	713.50	*137.0	6.97.0	0.0360	744.50	*744.50	*0.000	*0.000	*0.000
6.46.5	0.0355	714.00	*137.0	6.97.5	0.0365	745.0	*745.0	*0.000	*0.000	*0.000
6.47.0	0.0360	714.50	*137.0	6.98.0	0.0370	745.50	*745.50	*0.000	*0.000	*0.000
6.47.5	0.0365	715.00	*137.0	6.98.5	0.0375	746.0	*746.0	*0.000	*0.000	*0.000
6.48.0	0.0370	715.50	*137.0	6.99.0	0.0380	746.50	*746.50	*0.000	*0.000	*0.000
6.48.5	0.0375	716.00	*137.0	6.99.5	0.0385	747.0	*747.0	*0.000	*0.000	*0.000
6.49.0	0.0380	716.50	*137.0	7.00.0	0.0390	747.50	*747.50	*0.000	*0.000	*0.000
6.49.5	0.0385	717.00	*137.0	7.00.5	0.0395	748.0	*748.0	*0.000	*0.000	*0.000
6.50.0	0.0390	717.50	*137.0	7.01.0	0.0400	748.50	*748.50	*0.000	*0.000	*0.000
6.50.5	0.0395	718.00	*137.0	7.01.5	0.0405	749.0	*749.0	*0.000	*0.000	*0.000
6.51.0	0.0400	718.50	*137.0	7.02.0	0.0410	749.50	*749.50	*0.000	*0.000	*0.000
6.51.5	0.0405	719.00	*137.0	7.02.5	0.0415	750.0	*750.0	*0.000	*0.000	*0.000
6.52.0	0.0410	719.50	*137.0	7.03.0	0.0420	750.50	*750.50	*0.000	*0.000	*0.000
6.52.5	0.0415	720.00	*137.0	7.03.5	0.0425	751.0	*751.0	*0.000	*0.000	*0.000
6.53.0	0.0420	720.50	*137.0	7.04.0	0.0430	751.50	*751.50	*0.000	*0.000	*0.000
6.53.5	0.0425	721.00	*137.0	7.04.5	0.0435	752.0	*752.0	*0.000	*0.000	*0.000
6.54.0	0.0430	721.50	*137.0	7.05.0	0.0440	752.50	*752.50	*0.000	*0.000	*0.000
6.54.5	0.0435	722.00	*137.0	7.05.5	0.0445	753.0	*753.0	*0.000	*0.000	*0.000
6.55.0	0.0440	722.50	*137.0	7.06.0	0.0450	753.50	*753.50	*0.000	*0.000	*0.000
6										

Table 2a. (Cont)

DMSP FILTER NO. 8531
707 WAVENUMBER CHANNEL
FREQUENCY STEP = 5 WAVENUMBERS
FREQUENCY STEP = 5 WAVENUMBERS

FREQUENCY	FILTER TRANSMISSION								
691.0	0.120.0	708.50	•572.0	713.00	•0010	734.50	•335.0		
691.50	•0.120	709.00	•563.0	713.50	•3023	734.00	•271.0		
692.00	•0.020	709.50	•545.0	714.00	•0030	731.50	•205.0		
692.50	•0.020	710.00	•535.0	714.50	•0040	732.00	•195.0		
693.00	•0.020	710.50	•522.0	715.00	•0050	732.50	•193.0		
693.50	•0.020	711.00	•501.0	715.50	•0060	733.00	•193.0		
694.00	•0.020	711.50	•491.0	716.00	•0070	733.50	•077.0		
694.50	•0.020	712.00	•482.0	716.50	•0110	734.00	•655.0		
695.00	•0.020	712.50	•473.0	717.00	•0150	734.50	•615.0		
695.50	•0.020	713.00	•393.0	717.50	•2270	735.00	•029.0		
696.00	•0.020	713.50	•323.0	718.00	•3520	735.50	•021.0		
696.50	•0.020	714.00	•292.0	718.50	•3730	736.00	•016.0		
697.00	•0.020	714.50	•242.0	719.00	•374.0	736.50	•012.0		
697.50	•0.020	715.00	•203.0	719.50	•4190	737.00	•009.0		
698.00	•0.020	715.50	•175.0	720.00	•497.0	737.50	•007.0		
698.50	•0.020	716.00	•152.0	720.50	•314.0	738.00	•005.0		
699.00	•0.020	716.50	•127.0	721.00	•557.0	738.50	•003.0		
699.50	•0.020	717.00	•103.0	721.50	•644.0	739.00	•001.0		
700.00	•0.020	717.50	•083.0	722.00	•5820	739.50	•000.0		
700.50	•0.020	718.00	•072.0	722.50	•3370	740.00	•000.0		
701.00	•0.020	718.50	•057.0	723.00	•473.0	740.50	•000.0		
701.50	•0.020	719.00	•042.0	723.50	•723.5	741.00	•000.0		
702.00	•0.020	719.50	•033.0	724.00	•724.0	741.50	•000.0		
702.50	•0.020	720.00	•032.0	724.50	•724.5	742.00	•000.0		
703.00	•0.020	720.50	•029.0	725.00	•725.0	742.50	•000.0		
703.50	•0.020	721.00	•029.0	725.50	•725.5	743.00	•000.0		
704.00	•0.020	721.50	•013.0	726.00	•726.0	743.50	•000.0		
704.50	•0.020	722.00	•013.0	726.50	•726.5	744.00	•000.0		
705.00	•0.020	722.50	•013.0	727.00	•727.0	744.50	•000.0		
705.50	•0.020	723.00	•013.0	727.50	•727.5	745.00	•000.0		
706.00	•0.020	723.50	•013.0	728.00	•728.0	745.50	•000.0		
706.50	•0.020	724.00	•013.0	728.50	•728.5	746.00	•000.0		
707.00	•0.020	724.50	•013.0	729.00	•729.0	746.50	•000.0		
707.50	•0.020	725.00	•013.0	729.50	•729.5	747.00	•000.0		
708.00	•0.020	725.50	•013.0	730.00	•730.0	747.50	•000.0		
708.50	•0.020	726.00	•013.0	730.50	•730.5	748.00	•000.0		
709.00	•0.020	726.50	•013.0	731.00	•731.0	748.50	•000.0		
709.50	•0.020	727.00	•013.0	731.50	•731.5	749.00	•000.0		
710.00	•0.020	727.50	•013.0	732.00	•732.0	749.50	•000.0		
710.50	•0.020	728.00	•013.0	732.50	•732.5	750.00	•000.0		
711.00	•0.020	728.50	•013.0	733.00	•733.0	750.50	•000.0		
711.50	•0.020	729.00	•013.0	733.50	•733.5	751.00	•000.0		
712.00	•0.020	729.50	•013.0	734.00	•734.0	751.50	•000.0		
712.50	•0.020	730.00	•013.0	734.50	•734.5	752.00	•000.0		
713.00	•0.020	730.50	•013.0	735.00	•735.0	752.50	•000.0		
713.50	•0.020	731.00	•013.0	735.50	•735.5	753.00	•000.0		
714.00	•0.020	731.50	•013.0	736.00	•736.0	753.50	•000.0		
714.50	•0.020	732.00	•013.0	736.50	•736.5	754.00	•000.0		
715.00	•0.020	732.50	•013.0	737.00	•737.0	754.50	•000.0		
715.50	•0.020	733.00	•013.0	737.50	•737.5	755.00	•000.0		
716.00	•0.020	733.50	•013.0	738.00	•738.0	755.50	•000.0		
716.50	•0.020	734.00	•013.0	738.50	•738.5	756.00	•000.0		
717.00	•0.020	734.50	•013.0	739.00	•739.0	756.50	•000.0		
717.50	•0.020	735.00	•013.0	739.50	•739.5	757.00	•000.0		
718.00	•0.020	735.50	•013.0	740.00	•740.0	757.50	•000.0		
718.50	•0.020	736.00	•013.0	740.50	•740.5	758.00	•000.0		
719.00	•0.020	736.50	•013.0	741.00	•741.0	758.50	•000.0		
719.50	•0.020	737.00	•013.0	741.50	•741.5	759.00	•000.0		
720.00	•0.020	737.50	•013.0	742.00	•742.0	759.50	•000.0		
720.50	•0.020	738.00	•013.0	742.50	•742.5	760.00	•000.0		
721.00	•0.020	738.50	•013.0	743.00	•743.0	760.50	•000.0		
721.50	•0.020	739.00	•013.0	743.50	•743.5	761.00	•000.0		
722.00	•0.020	739.50	•013.0	744.00	•744.0	761.50	•000.0		
722.50	•0.020	740.00	•013.0	744.50	•744.5	762.00	•000.0		
723.00	•0.020	740.50	•013.0	745.00	•745.0	762.50	•000.0		
723.50	•0.020	741.00	•013.0	745.50	•745.5	763.00	•000.0		
724.00	•0.020	741.50	•013.0	746.00	•746.0	763.50	•000.0		
724.50	•0.020	742.00	•013.0	746.50	•746.5	764.00	•000.0		
725.00	•0.020	742.50	•013.0	747.00	•747.0	764.50	•000.0		
725.50	•0.020	743.00	•013.0	747.50	•747.5	765.00	•000.0		
726.00	•0.020	743.50	•013.0	748.00	•748.0	765.50	•000.0		
726.50	•0.020	744.00	•013.0	748.50	•748.5	766.00	•000.0		
727.00	•0.020	744.50	•013.0	749.00	•749.0	766.50	•000.0		
727.50	•0.020	745.00	•013.0	749.50	•749.5	767.00	•000.0		
728.00	•0.020	745.50	•013.0	750.00	•750.0	767.50	•000.0		
728.50	•0.020	746.00	•013.0	750.50	•750.5	768.00	•000.0		
729.00	•0.020	746.50	•013.0	751.00	•751.0	768.50	•000.0		
729.50	•0.020	747.00	•013.0	751.50	•751.5	769.00	•000.0		
730.00	•0.020	747.50	•013.0	752.00	•752.0	769.50	•000.0		
730.50	•0.020	748.00	•013.0	752.50	•752.5	770.00	•000.0		
731.00	•0.020	748.50	•013.0	753.00	•753.0	770.50	•000.0		
731.50	•0.020	749.00	•013.0	753.50	•753.5	771.00	•000.0		
732.00	•0.020	749.50	•013.0	754.00	•754.0	771.50	•000.0		
732.50	•0.020	750.00	•013.0	754.50	•754.5	772.00	•000.0		
733.00	•0.020	750.50	•013.0	755.00	•755.0	772.50	•000.0		
733.50	•0.020	751.00	•013.0	755.50	•755.5	773.00	•000.0		
734.00	•0.020	751.50	•013.0	756.00	•756.0	773.50	•000.0		
734.50	•0.020	752.00	•013.0	756.50	•756.5	774.00	•000.0		
735.00	•0.020	752.50	•013.0	757.00	•757.0	774.50	•000.0		
735.50	•0.020	753.00	•013.0	757.50	•757.5	775.00	•000.0		
736.00	•0.020	753.50	•013.0	758.00	•758.0	775.50	•000.0		
736.50	•0.020	754.00	•013.0	758.50	•758.5	776.00	•000.0		
737.00	•0.020	754.50	•013.0	759.00	•759.0	776.50	•000.0		
737.50	•0.020	755.00	•013.0	759.50	•759.5	777.00	•000.0		
738.00	•0.020	755.50	•013.0	760.00	•760.0	777.50	•000.0		
738.50	•0.020	756.00	•013.0	760.50	•760.5	778.00	•000.0		
739.00	•0.020	756.50	•013.0	761.00	•761.0	778.50	•000.0		
739.50	•0.020	757.00	•013.0	761.50	•761.5	779.00	•000.0		
740.00	•0.020	757.50	•013.0	762.00	•762.0	779.50	•000.0		
740.50	•0.020	758.00	•013.0	762.50	•762.5	780.00	•000.0		
741.00	•0.020	758.50	•013.0	763.00	•763.0	780.50	•000.0		
741.50	•0.020	759.00	•013.0	763.50	•763.5	781.00	•000.0		
742.00	•0.020	759.50	•013.0	764.00	•764.0	781.50	•000.0		
742.50	•0.020	760.00	•013.0	764.50	•764.5	782.00	•000.0		
743.00	•0.020	760.50	•013.0	765.00	•765.0	782.50	•000.0		
743.50	•0.020	761.00	•013.0	765.50	•765.5	783.00	•000.0		
744.00	•0.020	761.50	•013.0	766.00	•766.0	783.50	•000.0		
744.50	•0.020	762.00	•013.0	766.50	•766.5	784.00	•000.0		
745.00	•0.020	762.50	•013.0	767.00	•767.0	784.50	•00		

BEST AVAILABLE COPY

Table 2a. (Cont)

OM SP FILTED NO. 4531
7+6 WAVE NUMBER CHANNEL
FREQUENCY STEP = .5 WAVE NUMBERS

FREQUENCY	FILTER TRANSMISSION	FREQUENCY	FILTER TRANSMISSION
7.42 .05	.0010	7.94 .50	.5711
7.72 .05	.0020	7.56 .00	.5322
7.73 .05	.0030	7.54 .50	.6213
7.75 .50	.0040	7.11 .00	.5112
7.74 .05	.0050	7.51 .50	.6032
7.74 .50	.0070		
7.75 .05	.0100	7.52 .50	.5571
7.75 .50	.0120	7.33 .00	.3631
7.76 .00	.0140	7.54 .50	.2532
7.76 .50	.0240	7.46 .00	.1723
7.77 .00	.1370	7.64 .50	.1272
7.77 .50	.0220	7.55 .00	.0722
7.78 .00	.0630	7.55 .50	.4330
7.78 .50	.0870	7.6 .00	.0313
7.79 .00	.1260	7.56 .50	.1251
7.79 .50	.1720	7.67 .00	.0132
7.80 .00	.2230	7.7 .50	.0123
7.80 .50	.3130	7.8 .50	.0106
7.81 .00	.7960	7.6 .50	.0171
7.81 .50	.4760	7.53 .00	.0113
7.82 .00	.2560	7.9 .50	.0073
7.82 .50	.6120	7.6 .00	.0323
7.83 .00	.6450	7.5 .50	.0021
7.83 .50	.6680	7.51 .00	.0021
7.84 .00	.6810		
7.84 .50	.0250		
7.85 .00	.6230		
7.85 .50	.5760		
7.86 .00	.6660		
7.86 .50	.5480		
7.87 .00	.5280		
7.87 .50	.6071		
7.88 .00	.5910		
7.88 .50	.5770		
7.89 .00	.5670		

Table 2b. Filter Functions for the Block 5C 9532 Satellite

FILTER TRANSMISSION		FILTER TRANSMISSION		FILTER TRANSMISSION		FILTER TRANSMISSION	
FUNCTION	FREQUENCY	FUNCTION	FREQUENCY	FUNCTION	FREQUENCY	FUNCTION	FREQUENCY
F60.00	* 0.25	F65.00	* 260	F70.00	* 560	F75.00	* 0.05
F65.00	* 0.50	F66.20	* 295	F71.00	* 71	F75.00	* 0.06
F66.00	* 0.58	F66.40	* 325	F72.00	* 23	F76.00	* 0.05
F67.00	* 0.68	F66.60	* 363	F73.00	* 393	F77.00	* 0.04
F68.00	* 0.82	F66.80	* 402	F74.00	* 373	F77.00	* 0.03
F69.00	* 1.00	F67.00	* 451	F75.00	* 775	F78.00	* 0.02
F69.20	* 1.10	F67.20	* 492	F76.00	* 713	F78.5.00	* 0.02
F69.40	* 1.20	F67.40	* 532	F77.00	* 304	F79.00	* 0.02
F69.60	* 1.40	F67.60	* 561	F78.00	* 72	F79.5.00	* 0.02
F69.80	* 1.50	F67.80	* 582	F79.00	* 26	F80.00	* 0.02
F60.00	* 1.80	F68.00	* 538	F79.20	* 254	F80.20	* 0.02
F60.20	* 2.00	F68.20	* 612	F79.40	* 33		
F60.40	* 2.10	F68.40	* 597	F79.60	* 225		
F60.60	* 2.30	F68.60	* 575	F79.80	* 67		
F60.80	* 250	F68.80	* 548	F79.80	* 163		
F61.00	* 2.76	F69.00	* 519	F79.90	* 164		
F61.20	* 2.90	F69.20	* 430	F79.90	* 149		
F61.40	* 3.00	F69.40	* 350	F79.90	* 135		
F61.60	* 3.20	F69.60	* 392	F79.90	* 123		
F61.80	* 3.50	F69.80	* 355	F79.90	* 114		
F62.00	* 3.79	F70.00	* 326	F79.90	* 103		
F62.20	* 3.92	F70.20	* 295	F79.90	* 86		
F62.40	* 2.55	F70.40	* 258	F79.90	* 682		
F62.60	* 3.00	F70.60	* 231	F79.90	* 122		
F62.80	* 3.50	F70.80	* 209	F79.90	* 143		
F63.20	* 3.60	F71.00	* 196	F79.90	* 13		
F63.60	* 3.65	F71.20	* 175	F79.90	* 35		
F63.70	* 3.70	F71.40	* 175	F79.90	* 24		
F63.80	* 3.90	F71.50	* 1240	F79.90	* 15		
F64.00	* 3.95	F72.00	* 113	F79.90	* 14		
F64.20	* 4.10	F72.20	* 104	F79.90	* 11		
F64.40	* 4.20	F72.40	* 95	F79.90	* 13		
F64.60	* 4.50	F72.60	* 384	F79.90	* 103		
F64.80	* 4.70	F72.80	* 284	F79.90	* 106		
F65.00	* 5.00	F73.00	* 95	F79.90	* 125		
F65.20	* 5.20	F73.20	* 692	F79.90	* 93		
F65.40	* 5.40	F73.40	* 651	F79.90	* 67		
F65.60	* 5.60	F73.60	* 59	F79.90	* 69		
F65.80	* 5.80	F73.80	* 542	F79.90	* 65		
F66.00	* 6.00	F74.00	* 542	F79.90	* 65		
F66.20	* 6.20	F74.20	* 542	F79.90	* 65		
F66.40	* 6.40	F74.40	* 542	F79.90	* 65		
F66.60	* 6.60	F74.60	* 542	F79.90	* 65		
F66.80	* 6.80	F74.80	* 542	F79.90	* 65		
F67.00	* 7.00	F75.00	* 542	F79.90	* 65		
F67.20	* 7.20	F75.20	* 542	F79.90	* 65		
F67.40	* 7.40	F75.40	* 542	F79.90	* 65		
F67.60	* 7.60	F75.60	* 542	F79.90	* 65		
F67.80	* 7.80	F75.80	* 542	F79.90	* 65		
F68.00	* 8.00	F76.00	* 542	F79.90	* 65		
F68.20	* 8.20	F76.20	* 542	F79.90	* 65		
F68.40	* 8.40	F76.40	* 542	F79.90	* 65		
F68.60	* 8.60	F76.60	* 542	F79.90	* 65		
F68.80	* 8.80	F76.80	* 542	F79.90	* 65		
F69.00	* 9.00	F77.00	* 542	F79.90	* 65		
F69.20	* 9.20	F77.20	* 542	F79.90	* 65		
F69.40	* 9.40	F77.40	* 542	F79.90	* 65		
F69.60	* 9.60	F77.60	* 542	F79.90	* 65		
F69.80	* 9.80	F77.80	* 542	F79.90	* 65		
F70.00	* 10.00	F78.00	* 542	F79.90	* 65		
F70.20	* 10.20	F78.20	* 542	F79.90	* 65		
F70.40	* 10.40	F78.40	* 542	F79.90	* 65		
F70.60	* 10.60	F78.60	* 542	F79.90	* 65		
F70.80	* 10.80	F78.80	* 542	F79.90	* 65		
F71.00	* 11.00	F79.00	* 542	F79.90	* 65		

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Table 2b. (Cont)

OMSP FILTER NO. 9532
676 WAVE NUMBER CHANNEL
FREQUENCY STEP = .5 WAVE NUMBERS

FREQUENCY	FILTER TRANSMISSION						
664.5	0.0000	691.50	.5020	682.00	0.0000	699.50	.4620
664.5	.0010	692.00	.4960	682.50	.0010	700.00	.4330
665.0	.0010	682.50	.4950	693.00	.0020	700.50	.3050
665.5	.0020	683.00	.3740	693.50	.0030	701.00	.2330
666.0	.0030	683.50	.3550	694.00	.0050	701.50	.1600
666.5	.0040	684.00	.2270	694.50	.0060	702.00	.0930
667.0	.0040	684.50	.1650	695.00	.0060	702.50	.0530
667.5	.0050	685.00	.1230	695.50	.0120	703.00	.0220
668.0	.0050	685.50	.0310	696.00	.0160	703.50	.0230
668.5	.0050	686.00	.0390	696.50	.0240	704.00	.0170
669.0	.0050	686.50	.0330	697.00	.0370	704.50	.0120
669.5	.0050	687.00	.0320	697.50	.0540	705.00	.0380
670.0	.0050	687.50	.0230	698.00	.0780	705.50	.0050
671.5	.0100	698.00	.0190	698.50	.1050	706.00	.0050
671.5	.0100	698.50	.0100	699.00	.1400	706.50	.0010
672.0	.0120	699.00	.0070	699.50	.2220	707.00	.0030
672.5	.0240	699.50	.0050	699.50	.3770	707.50	.0020
673.0	.0240	699.50	.0040	699.50	.3770	708.00	.0010
673.5	.0350	699.50	.0020	699.50	.4420	708.50	.0010
674.0	.0390	699.50	.0020	699.50	.4970	709.00	.0000
674.5	.0460	699.50	.0020	699.50	.5370		
675.0	.0460	699.50	.0020	699.50	.5770		
675.5	.0460	699.50	.0020	699.50	.5860		
676.0	.0520	699.50	.0020	699.50	.5960		
676.5	.0530	699.50	.0020	699.50	.6030		
677.0	.0540	699.50	.0020	699.50	.6030		
677.5	.0540	699.50	.0020	699.50	.5920		
678.0	.0560	699.50	.0020	699.50	.5810		
678.5	.0560	699.50	.0020	699.50	.5730		
679.0	.0570	699.50	.0020	699.50	.5620		
679.5	.0570	699.50	.0020	699.50	.5570		
680.0	.0570	699.50	.0020	699.50	.5500		
680.5	.0570	699.50	.0020	699.50	.5440		
681.0	.0570	699.50	.0020	699.50	.5240		
681.5	.0570	699.50	.0020	699.50	.5240		

Table 2b. (Cont)

DNSP FILTERED NO. 9512
707 WAVENUMBER CHANNEL
FREQUENCY STEP = .5 WAVENUMBERS

FREQUENCY	FILTER TRANSMISSION	FREQUENCY	FILTER TRANSMISSION	FREQUENCY	FILTER TRANSMISSION	FREQUENCY	FILTER TRANSMISSION
697.0	0.3000	710.50	.5330	710.50	0.0000	727.50	*.5630
693.50	*.0010	711.00	.5320	710.50	0.0000	728.00	*.5420
694.00	*.0010	711.50	.5310	711.00	*.0010	728.50	*.5100
694.50	*.0020	712.00	.5290	711.50	*.0010	729.00	*.4510
695.00	*.0020	712.50	.5230	712.00	*.0020	729.50	*.3710
695.50	*.0040	713.00	.4990	712.50	*.0030	730.00	*.2710
696.00	*.0050	713.50	.4220	713.00	*.0040	730.50	*.1320
696.50	*.0060	714.00	.3300	713.50	*.0060	731.00	*.1330
697.00	*.0070	714.50	.2360	714.00	*.0060	731.50	*.0890
697.50	*.0100	715.00	*.1630	714.50	*.5110	732.00	*.0823
698.00	*.2122	715.50	*.4050	715.00	*.0110	732.50	*.0420
698.50	*.1710	716.00	*.0710	715.50	*.0200	733.00	*.0310
699.00	*.5247	716.50	.5512	716.00	*.0260	733.50	*.0210
699.50	*.0330	717.00	*.0310	716.50	*.3880	734.00	*.0130
700.00	*.44-0	717.50	*.0230	717.00	*.3570	734.50	*.0120
700.50	*.6640	718.00	*.1170	717.50	*.0790	735.00	*.0120
701.00	*.1920	718.50	*.0120	718.00	*.1100	735.50	*.0330
701.50	*.4140	719.00	*.0050	718.50	*.1560	736.00	*.0040
702.00	*.1710	719.50	*.0070	719.00	*.2150	736.50	
702.50	*.2340	720.00	*.0140	719.50	*.2920	737.00	*.0030
703.00	*.3670	720.50	*.0330	720.00	*.1640	737.50	*.0010
703.50	*.3720	721.00	*.0024	720.50	*.3700	738.00	*.0000
704.00	*.2660	721.50	*.0011	721.00	*.9000	738.50	*.0000
704.50	*.6800	722.00	*.0103	721.50	*.5470	739.00	
705.00	*.5430	722.50	*.0001	722.00	*.2240		
705.50	*.5480	723.00	0.0000	722.50	*.7225		
706.00	*.5750			723.50	*.5220		
706.50	*.5190			724.00	*.6200		
707.00	*.6150			724.50	*.6340		
707.50				725.00	*.6420		
708.00				725.50	*.6200		
708.50				726.00	*.6160		
709.00				726.50	*.6070		
709.50				727.00	*.5970		
710.00				727.50	*.5800		
				728.00	*.5800		

BEST AVAILABLE COPY

BEST AVAILABLE COPY

Table 2b. (Cont)

FREQUENCY	FILTER TRANSMISSION	FREQUENCY	FILTER TRANSMISSION
773.0	0.0000	750.50	.6123
773.50	.0010	751.00	.5340
774.0	.0020	751.50	.5931
774.50	.0040	752.00	.4752
775.00	.0050	752.50	.3235
775.50		753.00	.1992
776.0		753.50	.1151
776.50		754.00	.0593
777.00		754.50	.0473
777.50		755.00	.0350
778.00		755.50	
778.50		756.00	.0233
779.00		756.50	.0150
779.50		757.00	.0122
780.00		757.50	.0113
780.50		758.00	.0103
781.00		758.50	.0093
781.50		759.00	.0083
782.00		759.50	.0073
782.50		760.00	.0063
783.00			
783.50			
784.00			
784.50			
785.00			
785.50			
786.00			
786.50			
787.00			
787.50			
788.00			
788.50			
789.00			
789.50			
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792.50			
793.00			
793.50			
794.00			
794.50			
795.00			
795.50			
796.00			
796.50			
797.00			
797.50			
798.00			
798.50			
799.00			
799.50			
800.00			

BEST AVAILABLE COPY

Table 3. Computed Transmittances for the Atmospheres Described by Table 1 and the Filter Functions Defined in Table 2. Transmittances are for the total path from the indicated pressure level to space

PT. MUGU 2/17/75 8531									
PRESSURE	TEMPERATURE	FREQUENCY						TRANSMITTANCE	
(mb)	(K)	668	676	695	717	727	747	767	787
.3311	251.86	9.3387E-11	9.8641E-01	9.8293E-01	9.9883E-11	9.9996E-01	9.9018E-01		
.4307	257.63	9.3127E-01	9.8665E-01	9.8210E-01	9.9863E-01	9.9993E-01	9.9011E-01		
.5577	262.83	9.1949E-01	9.8516E-01	9.8110E-01	9.9843E-01	9.9987E-01	9.9073E-01		
.7149	266.80	9.0698E-01	9.8340E-01	9.7961E-01	9.9613E-01	9.9976E-01	9.9763E-01		
.9265	252.83	8.9221E-01	9.8089E-01	9.7755E-01	9.9771E-01	9.9963E-01	9.9743E-01		
1.1958	265.77	8.7478E-01	9.7729E-01	9.7464E-01	9.9697E-01	9.9937E-01	9.9721E-01		
1.5388	267.18	8.5498E-01	9.7243E-01	9.7173E-01	9.9284E-01	9.9695E-01	9.9591E-01		
1.9739	271.84	8.3283E-01	9.6626E-01	9.6307E-01	9.9415E-01	9.9526E-01	9.9656E-01		
2.5351	265.34	8.1826E-01	9.5863E-01	9.6186E-01	9.9192E-01	9.9710E-01	9.9013E-01		
3.2765	262.77	7.8149E-01	9.4882E-01	9.5533E-01	9.8922E-01	9.9548E-01	9.9547E-01		
4.2525	258.45	7.5202E-01	9.3574E-01	9.4881E-01	9.8683E-01	9.9299E-01	9.9356E-01		
5.5698	239.92	7.1909E-01	9.1606E-01	9.4101E-01	9.8243E-01	9.8970E-01	9.9351E-01		
7.1365	232.77	6.8032E-01	8.9409E-01	9.3112E-01	9.7792E-01	9.8555E-01	9.9226E-01		
9.9349	227.82	6.3332E-01	8.6233E-01	9.1312E-01	9.7173E-01	9.8033E-01	9.9733E-01		
13.4219	220.39	5.7702E-01	8.2012E-01	9.0127E-01	9.6356E-01	9.7775E-01	9.8891E-01		
18.2290	218.74	5.1310E-01	7.6432E-01	8.7925E-01	9.3274E-01	9.6591E-01	9.8085E-01		
24.8911	214.80	4.4273E-01	6.9091E-01	8.4913E-01	9.3603E-01	9.5351E-01	9.8469E-01		
34.0944	213.93	3.6762E-01	5.9849E-01	8.0530E-01	9.1873E-01	9.3854E-01	9.8409E-01		
46.9254	211.00	2.8923E-01	4.8744E-01	7.4573E-01	8.3334E-01	9.1977E-01	9.7730E-01		
55.0800	211.75	2.4960E-01	4.2664E-01	7.0353E-01	8.7819E-01	9.3394E-01	9.7449E-01		
75.8900	210.95	1.7246E-01	3.0189E-01	6.2114E-01	8.1117E-01	8.8369E-01	9.6677E-01		
104.3900	215.25	1.0489E-01	1.8131E-01	5.1361E-01	7.9202E-01	8.5227E-01	9.1516E-01		
143.0200	215.05	5.5741E-02	8.3722E-02	3.9801E-01	7.2726E-01	8.1297E-01	9.3813E-01		
195.0100	215.65	2.9417E-02	2.3294E-02	2.6900E-01	6.4422E-01	7.6895E-01	9.1420E-01		
269.1700	218.85	2.0148E-02	2.6427E-03	1.5503E-01	5.3635E-01	7.1182E-01	9.3921E-01		
313.4000	224.05	1.8279E-02	5.9981E-04	1.0711E-01	4.7161E-01	6.7523E-01	9.5443E-01		
762.4500	236.05	1.6776E-02	1.0746E-05	6.6396E-02	3.9803E-01	9.3561E-01	9.2171E-01		
418.0700	244.75	1.5711E-02	1.6719E-05	3.5947E-02	3.1614E-01	5.6404E-01	7.7615E-01		
479.6500	250.45	1.3337E-02	2.5904E-06	1.6732E-02	2.3787E-01	5.2424E-01	7.2335E-01		
548.4400	258.25	1.2449E-02	3.8452E-07	6.5890E-03	1.4915E-01	4.6237E-01	6.6461E-01		
624.5600	265.45	1.1150E-02	4.3761E-08	2.1132E-03	1.1322E-01	3.9691E-01	6.3583E-01		
709.4600	272.25	9.9151E-03	3.1116E-09	5.2769E-04	7.3749E-02	3.3301E-01	5.3739E-01		
802.9800	276.15	8.6874E-03	1.1409E-10	1.0190E-04	4.1217E-02	2.6543E-01	4.6513E-01		
907.3600	281.55	7.4789E-03	1.8420E-12	1.5320E-05	2.2537E-02	2.0061E-01	3.6571E-01		
1022.7000	286.95	6.0204E-03	9.7624E-15	1.6565E-05	1.0802E-02	1.3547E-01	2.9337E-01		
TOTAL RADIANCE		5.7811E-06	4.5007E-06	4.4889E-06	5.8337E-06	7.6561E-06	9.0577E-06		

BEST AVAILABLE COPY

Table 3. (Cont)

BARKING SANDS
2/18/75
9532

PRESSURE (mb)	TEMPERATURE (K)	668	676	695	FREQUENCY	707	727	747	TRANSMITTANCE
.2612	257.37	9.4193E-01	9.8942E-01	9.5183E-01	9.9963E-01	9.9997E-01	9.9970E-01		
.3771	252.87	9.2692E-01	9.8690E-01	9.4106E-01	9.9931E-01	9.9994E-01	9.9957E-01		
.5515	263.17	9.0943E-01	9.8487E-01	9.7967E-01	9.9925E-01	9.9986E-01	9.9942E-01		
.9645	261.94	8.7652E-01	9.8009E-01	9.7545E-01	9.9830E-01	9.9955E-01	9.9817E-01		
1.7510	272.37	8.2520E-01	9.6833E-01	9.6342E-01	9.9515E-01	9.9453E-01	9.9267E-01		
2.3765	257.47	7.9743E-01	9.6004E-01	9.5351E-01	9.8655E-01	9.9743E-01	9.9723E-01		
3.2236	243.14	7.6539E-01	9.4755E-01	9.5295E-01	9.8971E-01	9.9561E-01	9.9578E-01		
4.3649	250.76	7.3215E-01	9.3131E-01	9.4527E-01	9.8639E-01	9.9301E-01	9.9627E-01		
6.9197	239.37	6.6845E-01	8.9380E-01	9.2329E-01	9.7939E-01	9.8633E-01	9.9161E-01		
7.5177	240.21	6.5622E-01	8.6574E-01	9.2428E-01	9.7751E-01	9.8493E-01	9.9370E-01		
9.1728	236.97	6.2274E-01	8.6281E-01	9.1515E-01	9.7291E-01	9.8798E-01	9.9254E-01		
13.3108	228.44	5.5181E-01	8.5770E-01	8.9242E-01	9.6139E-01	9.7191E-01	9.9031E-01		
15.8776	226.25	5.1372E-01	7.7485E-01	8.7303E-01	9.5557E-01	9.6666E-01	9.8914E-01		
27.5349	220.24	3.8827E-01	6.3665E-01	8.1709E-01	9.2783E-01	9.4411E-01	9.8442E-01		
35.0400	216.56	3.3012E-01	5.5907E-01	7.7663E-01	9.1135E-01	9.3156E-01	9.8151E-01		
50.0000	209.75	2.4169E-01	4.2551E-01	7.0771E-01	8.8434E-01	9.1112E-01	9.7532E-01		
70.0000	201.46	1.5936E-01	2.9535E-01	6.1244E-01	8.5372E-01	8.8683E-01	9.6317E-01		
100.0000	199.35	8.5635E-02	1.6081E-01	5.0666E-01	8.1333E-01	8.5749E-01	9.5905E-01		
150.0000	211.06	3.3365E-02	4.0481E-02	3.5343E-01	7.3802E-01	6.0394E-01	9.3979E-01		
175.0000	217.35	2.3562E-02	2.4229E-02	2.8714E-01	6.9374E-01	7.8514E-01	9.2692E-01		
250.0000	230.15	1.4166E-02	2.0416E-03	1.4176E-01	5.4833E-01	7.0081E-01	8.7737E-01		
400.0000	249.15	1.0318E-02	3.8739E-06	2.3120E-02	2.8535E-01	5.5055E-01	7.5531E-01		
500.0000	260.85	8.7313E-03	7.4150E-08	4.9369E-03	1.4339E-01	4.5799E-01	6.6294E-01		
700.0000	274.75	6.3620E-03	0.	1.0335E-04	4.3750E-02	2.8294E-01	4.8193E-01		
800.0000	243.56	5.1173E-03	0.	1.0276E-05	1.9354E-02	1.9571E-01	3.6115E-01		
900.0000	287.06	3.2543E-03	0.	6.5471E-07	6.3253E-03	1.0084E-01	2.0558E-01		
950.0000	290.75	2.4601E-03	0.	1.3181E-07	3.2432E-03	7.2260E-02	1.4563E-01		
1000.0000	295.06	1.8042E-03	0.	2.5609E-08	1.5558E-03	4.6555E-02	9.7534E-02		
1020.0000	297.56	1.5671E-03	0.	1.2018E-08	1.1355E-03	3.8441E-02	8.1227E-02		
TOTAL RADTANCE		5.8569E-06	4.4495E-06	4.5129E-06	6.1371E-06	7.9620E-06	9.4456E-06		

Table 3. (Cont)

KWAJALEIN
2/20/75
9532

PRESSURE (MB)	TEMPERATURE (K)	668	676	695	FREQUENCY			TRANSMITTANCE
					717	727	747	
.1126	248.37	9.6294E-01	9.9488E-01	9.8323E-01	9.997E-01	1.000E+00	9.9998E-01	
.3414	261.57	9.3295E-01	9.8784E-01	9.8143E-01	9.9957E-01	9.9997E-01	9.9992E-01	
.6116	269.17	9.0673E-01	9.8550E-01	9.7129E-01	9.9913E-01	9.998E-01	9.9937E-01	
1.1136	272.02	8.6764E-01	9.7135E-01	9.7168E-01	9.9775E-01	9.9944E-01	9.9804E-01	
1.5088	272.57	8.4253E-01	9.7285E-01	9.6880E-01	9.9625E-01	9.9896E-01	9.9779E-01	
2.2655	260.17	8.0508E-01	9.6263E-01	9.6197E-01	9.9327E-01	9.9775E-01	9.9734E-01	
3.5299	253.71	7.6022E-01	9.4572E-01	9.5155E-01	9.8699E-01	9.9532E-01	9.9553E-01	
5.1478	241.11	7.1690E-01	9.2336E-01	9.4127E-01	9.8402E-01	9.916E-01	9.9536E-01	
6.7861	242.22	6.7376E-01	9.0195E-01	9.3148E-01	9.8532E-01	9.8832E-01	9.9452E-01	
10.8153	234.57	6.0209E-01	8.4796E-01	9.0499E-01	9.6933E-01	9.7985E-01	9.913E-01	
16.2479	229.96	5.1925E-01	7.8150E-01	8.8092E-01	9.5635E-01	9.6311E-01	9.6932E-01	
26.8219	227.07	4.0575E-01	6.5947E-01	8.2505E-01	9.3111E-01	9.4651E-01	9.5711E-01	
37.7105	215.59	3.2427E-01	5.5172E-01	7.6376E-01	9.1812E-01	9.3044E-01	9.6021E-01	
50.0000	203.25	2.5415E-01	4.4456E-01	7.1761E-01	8.8945E-01	9.1467E-01	9.7673E-01	
70.0000	202.35	1.7097E-01	3.1565E-01	6.3281E-01	8.6222E-01	8.9333E-01	9.7122E-01	
100.0000	192.15	9.4079E-02	1.7833E-01	5.3380E-01	8.2599E-01	8.6604E-01	9.6294E-01	
172.0000	215.14	2.4442E-02	2.7514E-02	3.1.12E-01	7.1538E-01	7.9543E-01	9.3416E-01	
271.3900	243.92	1.2565E-02	5.1.33E-04	9.3611E-02	4.6933E-01	6.6452E-01	5.4590E-01	
408.1900	260.78	1.0057E-02	6.5920E-06	2.2.30E-02	2.6367E-01	9.4283E-01	7.3693E-01	
510.3700	268.70	8.7111E-03	9.8732E-05	4.3502E-03	1.4567E-01	4.5568E-01	5.3330E-01	
614.9800	279.46	6.8841E-03	1.9587E-03	6.1713E-04	7.2315E-02	3.3821E-01	5.2330E-01	
754.0000	288.44	5.2230E-03	4.6386E-12	2.8003E-05	2.5147E-02	2.1971E-01	3.7917E-01	
807.8500	290.11	4.7470E-03	5.1171E-13	9.3314E-06	1.7756E-02	1.8833E-01	3.3552E-01	
852.1600	290.74	3.9753E-03	3.8788E-14	2.8257E-06	1.1985E-02	1.4712E-01	2.6813E-01	
903.0000	292.00	3.0143E-03	1.8568E-15	6.2667E-07	5.7593E-03	1.0129E-01	1.6914E-01	
956.6200	295.59	2.0234E-03	5.2571E-17	9.9141E-08	2.4555E-03	5.9441E-02	1.1479E-01	
984.2300	298.00	1.5400E-03	6.9568E-18	3.2312E-08	1.4305E-03	4.1444E-02	8.1035E-02	
1011.9100	302.21	1.1535E-03	8.3077E-19	1.0303E-08	8.0594E-04	2.8164E-02	5.6732E-02	
TOTAL RADIANCE		5.9488E-06	4.4523E-06	4.6628E-06	6.6935E-06	3.5573E-06	1.0178E-06	

Table 3. (Cont)

BARKING SANDS
2/24/75
8531

PRESSURE (MB)	TEMPERATURE (K)	668	676	595	FREQUENCY			TRANSMITTANCE
					737	727	747	
.2224	247.77	9.5253E-01	9.9152E-01	9.8378E-01	9.9892E-01	9.9398E-01	9.9832E-01	
.2838	257.47	9.4452E-01	9.8946E-01	9.8318E-01	9.968E-01	9.9978E-01	9.9516E-01	
.3751	260.37	9.3564E-01	9.8756E-01	9.8245E-01	9.9673E-01	9.995E-01	9.9798E-01	
.4453	259.87	9.2572E-01	9.8598E-01	9.8158E-01	9.9659E-01	9.9991E-01	9.9731E-01	
.6267	262.05	9.1426E-01	9.8445E-01	9.8143E-01	9.9636E-01	9.9984E-01	9.9764E-01	
.8069	269.33	9.0785E-01	9.8242E-01	9.7973E-01	9.9799E-01	9.9373E-01	9.9746E-01	
1.0376	253.47	8.5507E-01	9.7949E-01	9.7334E-01	9.9741E-01	9.9954E-01	9.9725E-01	
1.3413	259.75	8.6663E-01	9.7539E-01	9.7113E-01	9.9657E-01	9.9926E-01	9.9735E-01	
1.7749	241.45	8.4571E-01	9.6986E-01	9.6399E-01	9.9532E-01	9.9876E-01	9.9079E-01	
2.2474	264.73	8.2217E-01	9.6785E-01	9.6106E-01	9.9347E-01	9.9796E-01	9.9433E-01	
2.9085	252.74	7.9530E-01	9.5603E-01	9.5777E-01	9.9413E-01	9.9573E-01	9.9592E-01	
7.9984	246.82	7.6801E-01	9.4223E-01	9.5293E-01	9.9041E-01	9.9495E-01	9.9534E-01	
5.0244	216.65	7.3518E-01	9.2613E-01	9.4590E-01	9.8523E-01	9.9243E-01	9.9522E-01	
6.6715	237.21	6.9483E-01	9.0463E-01	9.3667E-01	9.8123E-01	9.8397E-01	9.9340E-01	
8.8971	237.21	6.5426E-01	8.7640E-01	9.2457E-01	9.7574E-01	9.8332E-01	9.9122E-01	
11.9675	223.07	6.0115E-01	8.3485E-01	9.0244E-01	9.6800E-01	9.7566E-01	9.9100E-01	
16.2119	221.47	5.7959E-01	7.8891E-01	8.8349E-01	9.5946E-01	9.7144E-01	9.8333E-01	
22.0045	218.82	4.71199E-01	7.2783E-01	8.6327E-01	9.4723E-01	9.6152E-01	9.6579E-01	
25.6874	219.74	4.3616E-01	6.6449E-01	8.4557E-01	9.3952E-01	9.5523E-01	9.6440E-01	
30.0200	219.57	3.9903E-01	6.4016E-01	8.2222E-01	9.3455E-01	9.4302E-01	9.6239E-01	
40.9800	215.45	3.2363E-01	5.3699E-01	7.7398E-01	9.1855E-01	9.7130E-01	9.7391E-01	
56.3920	209.36	2.4543E-01	4.2084E-01	7.0399E-01	8.8155E-01	9.1384E-01	9.7398E-01	
78.7920	193.75	1.6491E-01	2.8763E-01	6.2185E-01	8.5109E-01	8.8399E-01	9.6747E-01	
111.4400	199.07	9.3712E-02	1.5757E-01	5.2321E-01	8.1175E-01	8.6220E-01	8.5322E-01	
155.3000	210.45	4.7545E-02	6.2757E-02	3.9746E-01	7.4079E-01	8.2395E-01	9.4376E-01	
212.5820	222.45	2.6471E-02	1.4848E-02	2.5578E-01	6.5422E-01	7.7772E-01	9.1507E-01	
285.1400	217.15	1.9351E-02	1.5991E-03	1.3426E-01	5.1522E-01	7.0369E-01	8.6677E-01	
374.6670	250.17	1.5399E-02	6.5630E-02	5.0592E-02	3.5460E-01	9.1100E-01	7.3-19E-01	
493.2200	265.35	1.3215E-02	1.6610E-06	1.1347E-02	2.0135E-01	5.0217E-01	6.9791E-01	
637.8700	275.65	1.0727E-02	2.1947E-04	1.2414E-03	9.1725E-02	3.7531E-01	5.8234E-01	
715.9470	241.97	9.5639E-03	1.7363E-13	2.9343E-04	5.6489E-02	3.1372E-01	5.1649E-01	
806.9070	246.71	8.0523E-03	6.2923E-11	4.9384E-05	3.1308E-02	2.3484E-01	4.2421E-01	
907.4700	290.55	6.0277E-03	8.1790E-13	5.2930E-06	1.4220E-02	1.5107E-01	2.9612E-01	
1019.0000	294.65	3.6041E-03	2.7325E-15	2.7589E-07	4.5534E-03	7.2466E-02	1.5559E-02	
TOTAL RADIANCE		5.55E2E-06	4.1942E-06	4.5131E-06	6.5511E-06	8.4929E-06	1.0335E-06	

Table 3. (Cont)

BARKING SANDS
2/26/75
8531

PRESSURE	TEMPERATURE				FREQUENCY			
(MB)	(K)	668	676	695	707	727	747	TRANSMITTANCE
.3043	259.51	9.3613E-01	9.8768E-01	9.8169E-01	9.9865E-01	9.9995E-01	9.9734E-01	
.5000	259.94	9.1624E-01	9.8700E-01	9.8119E-01	9.9832E-01	9.9985E-01	9.9711E-01	
.7000	264.53	8.9839E-01	9.8201E-01	9.7816E-01	9.9789E-01	9.9970E-01	9.9687E-01	
1.0000	264.66	8.7473E-01	9.7728E-01	9.7445E-01	9.9635E-01	9.9931E-01	9.9595E-01	
2.0000	261.72	8.1506E-01	9.6247E-01	9.9277E-01	9.9759E-01	9.9573E-01		
5.0000	276.56	7.1124E-01	9.1272E-01	9.3330E-01	9.8134E-01	9.8923E-01	9.9239E-01	
10.0000	224.59	5.9879E-01	8.3737E-01	9.0768E-01	9.6661E-01	9.7585E-01	9.8833E-01	
20.0000	221.84	4.4920E-01	7.0059E-01	8.4930E-01	9.3735E-01	9.5167E-01	9.8322E-01	
30.0000	216.92	3.5742E-01	5.8105E-01	7.9165E-01	9.1035E-01	9.3663E-01	9.7662E-01	
75.6224	216.97	3.0512E-01	5.1211E-01	7.5725E-01	8.9335E-01	9.1853E-01	9.7555E-01	
45.0000	215.75	2.8346E-01	4.7941E-01	7.3410E-01	8.8534E-01	9.1268E-01	9.7336E-01	
50.0000	211.95	2.2881E-01	3.9443E-01	6.8055E-01	8.6447E-01	8.9723E-01	9.6945E-01	
70.0000	198.15	1.4993E-01	2.6182E-01	5.9137E-01	8.2944E-01	8.7322E-01	9.6201E-01	
100.0000	196.65	8.0364E-02	1.3259E-01	4.8787E-01	7.8627E-01	8.4444E-01	9.5233E-01	
150.0000	204.17	3.4979E-02	3.3916E-02	3.3139E-01	7.0638E-01	7.9691E-01	9.3212E-01	
200.0000	213.85	2.2769E-02	6.4268E-03	2.1204E-01	6.0963E-01	7.4557E-01	9.0268E-01	
300.0000	239.03	1.6390E-02	1.1993E-02	7.0475E-02	4.0610E-01	6.3026E-01	8.2277E-01	
350.0000	245.15	1.5313E-02	1.6184E-03	3.6564E-02	3.1773E-01	5.8356E-01	7.7744E-01	
400.0000	252.95	1.7378E-02	2.7179E-03	1.7572E-02	2.4292E-01	5.3219E-01	7.3042E-01	
450.0000	260.05	1.2807E-02	5.1337E-07	7.7050E-03	1.8117E-01	4.8142E-01	6.8335E-01	
500.0000	266.95	1.1764E-02	9.4420E-04	3.1641E-03	1.3234E-01	4.3179E-01	6.3634E-01	
550.0000	271.05	1.0941E-02	1.5674E-04	1.2105E-03	9.4951E-02	3.8433E-01	5.9059E-01	
600.0000	273.75	1.0120E-02	2.2762E-03	4.4131E-04	6.7325E-02	3.3944E-01	5.4016E-01	
650.0000	276.95	9.2768E-03	2.8607E-03	1.5560E-04	4.8614E-02	2.9724E-01	5.0339E-01	
700.0000	280.45	8.5984E-03	3.0762E-11	5.4501E-03	3.4784E-02	2.5809E-01	4.6159E-01	
750.0000	282.85	7.9856E-03	2.7924E-12	1.9143E-02	2.5053E-02	2.2271E-01	4.2236E-01	
800.0000	287.25	7.4205E-03	2.1348E-13	6.7227E-16	1.8722E-02	1.9.44E-01	3.8527E-01	
850.0000	289.25	6.9733E-03	2.4212E-14	2.9164E-06	1.3922E-02	1.6509E-01	3.5179E-01	
850.0000	287.85	6.7458E-03	1.3435E-14	2.3066E-05	1.3030E-02	1.5873E-01	3.4107E-01	
850.0000	245.35	6.2995E-03	4.5108E-15	1.4538E-05	1.1073E-02	1.4162E-01	3.1075E-01	
898.0000	286.15	5.2751E-03	7.0141E-16	5.9155E-07	7.8733E-03	1.1070E-01	2.4935E-01	
950.0000	293.95	3.4804E-03	1.6472E-17	8.4517E-08	3.5431E-03	6.3336E-02	1.4891E-01	
1000.0000	294.65	2.0364E-03	1.6136E-13	7.1252E-03	1.2731E-03	3.0831E-02	7.6631E-02	
1020.0000	292.35	1.8795E-03	5.9751E-20	4.3326E-09	1.0565E-03	2.6940E-02	6.7519E-02	
TOTAL RADIANCE		5.7314E-06	4.3436E-06	4.3728E-06	5.9458E-06	7.9370E-16	9.5071E-06	

Table 3. (Cont)

KWAJALEIN
2/27/75
9532

PRESSURE (mb)	TEMPERATURE (K)	FREQUENCY						TRANSMITTANCE
		668	676	695	707	727	747	
1708	249.62	9.6768E-01	9.9506E-01	9.8287E-01	9.9973E-01	1.0000E+00	9.9888E-01	
12851	253.66	9.3768E-01	9.6870E-01	9.8162E-01	9.9962E-01	9.9997E-01	9.9857E-01	
5084	269.77	9.1349E-01	9.8530E-01	9.7395E-01	9.9931E-01	9.9985E-01	9.9838E-01	
77082	269.77	8.9531E-01	9.8303E-01	9.7794E-01	9.9685E-01	9.9975E-01	9.9813E-01	
1.0005	270.67	8.7183E-01	9.7916E-01	9.7442E-01	9.9737E-01	9.9949E-01	9.9795E-01	
1.4999	270.41	8.7858E-01	9.7188E-01	9.6502E-01	9.9601E-01	9.9885E-01	9.9767E-01	
2.0195	262.81	8.1119E-01	9.6444E-01	9.6227E-01	9.9383E-01	9.9797E-01	9.9735E-01	
4.1208	250.96	7.3664E-01	9.3436E-01	9.4595E-01	9.8650E-01	9.9317E-01	9.9532E-01	
7.3911	237.02	6.5908E-01	8.6712E-01	9.2514E-01	9.7759E-01	9.8497E-01	9.9393E-01	
10.1520	232.43	6.0396E-01	8.4919E-01	9.0946E-01	9.7124E-01	9.7875E-01	9.9190E-01	
12.1900	230.62	5.6871E-01	8.2211E-01	8.9842E-01	9.6493E-01	9.7436E-01	9.9075E-01	
20.4300	226.07	4.5711E-01	7.1811E-01	8.5429E-01	9.4431E-01	9.5707E-01	9.8693E-01	
30.9600	218.49	3.5973E-01	5.9977E-01	7.9680E-01	9.1965E-01	9.3755E-01	9.8271E-01	
49.6800	209.24	2.4298E-01	4.3764E-01	7.0380E-01	8.8433E-01	9.1701E-01	9.7575E-01	
98.8700	199.27	8.7148E-02	1.6359E-01	5.1347E-01	8.1732E-01	9.6101E-01	9.6193E-01	
151.5400	207.73	3.2382E-02	6.5396E-02	3.5482E-01	7.4649E-01	9.1442E-01	9.4338E-01	
199.7800	220.29	1.8532E-02	1.1719E-02	2.3308E-01	6.5985E-01	7.6620E-01	9.1712E-01	
250.3500	231.16	1.4245E-02	1.9584E-02	1.4554E-01	5.5673E-01	7.1333E-01	9.6102E-01	
279.8000	237.37	1.3097E-02	6.6907E-03	1.0625E-01	4.9713E-01	6.8425E-01	8.5745E-01	
299.6030	241.57	1.2461E-02	2.9835E-04	8.3217E-02	4.6675E-01	6.5291E-01	8.3317E-01	
772.4200	249.08	1.1583E-02	7.6304E-02	5.4287E-02	3.3733E-01	5.2755E-01	8.6748E-01	
365.0200	252.97	1.0759E-02	1.6199E-02	3.2926E-02	3.2162E-01	5.8611E-01	7.7125E-01	
406.5970	257.87	9.9772E-03	2.9558E-03	1.8479E-02	2.5991E-01	5.4531E-01	7.3121E-01	
448.4200	263.23	9.2177E-03	4.8909E-03	9.4173E-03	2.4173E-01	5.0005E-01	8.8675E-01	
478.1100	266.57	8.7197E-03	1.4462E-07	5.6558E-03	1.6777E-01	4.7006E-01	8.5490E-01	
509.4700	268.41	8.2399E-03	4.212E-06	3.2257E-03	1.3738E-01	4.3902E-01	8.2169E-01	
559.7700	273.2	7.5196E-03	6.0111E-09	1.2415E-03	9.8334E-02	3.8902E-01	5.6577E-01	
613.9000	278.81	6.7673E-03	6.8487E-13	4.0363E-04	6.6524E-02	3.3341E-01	5.1003E-01	
713.6100	285.04	5.4096E-03	7.6283E-12	4.0113E-05	3.0033E-02	2.3397E-01	3.9418E-01	
757.2600	286.86	4.9125E-03	8.5304E-13	1.4511E-05	2.1329E-02	2.0503E-01	3.4493E-01	
803.3900	286.69	4.2374E-03	6.8750E-14	4.4731E-03	1.3994E-02	1.6635E-01	2.9235E-01	
851.9700	289.69	3.2025E-03	3.3708E-15	1.0089E-05	7.3622E-03	1.1449E-01	2.0478E-01	
877.1500	291.18	2.7165E-03	6.4339E-16	4.4313E-07	5.1638E-03	9.2304E-02	1.6630E-01	
902.9300	293.29	2.3361E-03	1.1451E-16	1.9433E-07	3.6639E-03	7.5211E-02	1.3755E-01	
929.3200	293.97	1.9645E-03	1.7933E-17	7.9914E-08	2.5002E-03	5.9457E-02	1.1093E-01	
956.3400	295.52	1.5291E-03	2.2698E-18	2.7367E-08	1.5123E-03	4.2921E-02	8.1173E-02	
983.9400	297.94	1.1266E-03	2.3690E-19	8.2312E-09	8.2518E-04	2.8270E-02	5.5418E-02	
1011.6900	301.87	8.0666E-04	2.1686E-20	2.2905E-09	4.2932E-04	1.8000E-02	3.6394E-02	
TOTAL RADIANCE		5.8722E-06	4.3654E-06	4.4596E-06	6.4323E-06	8.3899E-06	9.8091E-06	

Table 3. (Cont)

BARKING SANDS
2/28/75
9532

PRESSURE (mb)	TEMPERATURE (K)	FREQUENCY						TRANSMITTANCE
		668	676	695	707	727	747	
.3347	263.99	9.3478E-01	9.8817E-01	9.8183E-01	9.9961E-01	9.9990E-01	9.9875E-01	
.4000	262.61	9.2445E-01	9.8657E-01	9.8109E-01	9.9949E-01	9.9933E-01	9.9867E-01	
.5854	266.29	9.0629E-01	9.8448E-01	9.7937E-01	9.9915E-01	9.9984E-01	9.9848E-01	
.6645	262.69	8.9920E-01	9.8359E-01	9.7657E-01	9.9899E-01	9.9979E-01	9.9841E-01	
.8574	264.26	8.8117E-01	9.8122E-01	9.7343E-01	9.9851E-01	9.9965E-01	9.9826E-01	
1.1142	269.16	8.6437E-01	9.7775E-01	9.7148E-01	9.9781E-01	9.9342E-01	9.9816E-01	
1.6574	261.19	8.3188E-01	9.6390E-01	9.6723E-01	9.9599E-01	9.9577E-01	9.9790E-01	
2.8417	239.64	7.8045E-01	9.5305E-01	9.5667E-01	9.9163E-01	9.9671E-01	9.9730E-01	
6.2946	245.52	7.3534E-01	9.3212E-01	9.4054E-01	9.8717E-01	9.935E-01	9.9545E-01	
7.6237	228.57	6.5617E-01	8.8585E-01	9.2347E-01	9.7024E-01	9.856E-01	9.9344E-01	
11.8875	225.37	5.7661E-01	8.2669E-01	9.0225E-01	9.6732E-01	9.7573E-01	9.9237E-01	
16.0428	222.31	5.1791E-01	7.7332E-01	8.8777E-01	9.5735E-01	9.6845E-01	9.9191E-01	
21.7975	218.62	4.6449E-01	7.0278E-01	8.1513E-01	9.4389E-01	9.5740E-01	9.8793E-01	
30.0000	217.65	3.8866E-01	6.1077E-01	8.0787E-01	9.2547E-01	9.426E-01	9.8485E-01	
40.0000	215.15	2.9787E-01	5.1275E-01	7.5396E-01	9.4471E-01	9.2625E-01	9.8195E-01	
50.0000	211.15	2.4195E-01	4.2871E-01	7.0303E-01	8.8607E-01	9.1177E-01	9.7770E-01	
70.0000	201.15	1.5384E-01	2.9547E-01	6.1343E-01	8.9473E-01	8.8797E-01	9.7009E-01	
100.0000	200.35	8.5752E-02	1.6291E-01	5.0798E-01	8.1353E-01	8.5821E-01	9.6035E-01	
150.0000	209.75	3.3799E-02	4.8491E-02	3.5183E-01	7.3861E-01	8.136E-01	9.4495E-01	
175.0000	215.25	2.3593E-02	2.4184E-02	2.8165E-01	6.9573E-01	7.8654E-01	9.2779E-01	
200.0000	210.75	1.8497E-02	1.1302E-02	2.3205E-01	6.5001E-01	7.6235E-01	9.1325E-01	
250.0000	224.15	1.4284E-02	2.0318E-03	1.4574E-01	5.5755E-01	7.1512E-01	8.8155E-01	
300.0000	234.15	1.2594E-02	2.9596E-02	8.6303E-02	4.6621E-01	6.6783E-01	8.4534E-01	
400.0000	251.35	1.1432E-02	4.4920E-06	2.4173E-02	2.9277E-01	5.6533E-01	7.6097E-01	
500.0000	262.35	8.7660E-03	7.0061E-08	4.9738E-03	1.640E-01	4.6214E-01	6.6694E-01	
600.0000	271.85	7.4441E-03	1.5895E-09	7.8385E-04	8.5692E-02	3.6723E-01	5.7213E-01	
650.0000	275.75	6.9004E-03	2.0192E-10	2.9157E-04	6.1383E-02	3.2606E-01	5.2789E-01	
700.0000	277.35	6.4346E-03	2.2324E-11	1.0452E-04	4.4272E-02	2.8893E-01	4.8774E-01	
750.0000	279.95	5.9491E-03	2.0967E-12	3.6496E-05	3.1635E-02	2.5261E-01	4.4411E-01	
800.0000	283.25	5.4543E-03	1.6356E-13	1.2423E-05	2.2320E-02	2.1760E-01	3.9878E-01	
850.0000	285.55	4.8671E-03	1.0246E-14	3.9737E-06	1.5123E-02	1.8137E-01	3.4457E-01	
900.0000	287.25	3.9776E-03	4.7218E-16	1.0457E-06	9.3333E-03	1.3661E-01	2.6664E-01	
950.0000	290.85	3.0056E-03	1.5812E-17	2.2489E-07	4.7105E-03	9.3336E-02	1.8643E-01	
1000.0000	294.75	2.1809E-03	3.9941E-19	4.1389E-08	2.2449E-03	5.9578E-02	1.2326E-01	
1022.0000	297.85	1.8397E-03	7.0943E-20	1.6132E-08	1.5588E-03	4.7398E-02	9.9111E-02	
TOTAL RADIANCE		5.4738E-06	4.2326E-06	4.3107E-06	6.0555E-06	8.0157E-06	9.5811E-06	

Table 3. (Cont)

KWAJALEIN
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8531

PRESSURE (mb)	TEMPERATURE (K)	FREQUENCY						TRANSMITTANCE
		668	676	695	707	727	747	
1070	261.42	9.6657E-01	9.9560E-01	9.8363E-01	9.9892E-01	1.0000E+00	9.9822E-01	
2051	247.93	9.5474E-01	9.9215E-01	9.8266E-01	9.9833E-01	9.9998E-01	9.9785E-01	
3059	255.82	9.4279E-01	9.8906E-01	9.8231E-01	9.9875E-01	9.9997E-01	9.9775E-01	
4053	257.84	9.2325E-01	9.8566E-01	9.8103E-01	9.9852E-01	9.9991E-01	9.9748E-01	
5056	267.05	9.0441E-01	9.8304E-01	9.7911E-01	9.9812E-01	9.9977E-01	9.9723E-01	
6094	275.99	8.8139E-01	9.7872E-01	9.7553E-01	9.9721E-01	9.9943E-01	9.9593E-01	
7034	262.73	8.3011E-01	9.6555E-01	9.6353E-01	9.9385E-01	9.9821E-01	9.9623E-01	
80012	256.79	7.9228E-01	9.5278E-01	9.5773E-01	9.9055E-01	9.9644E-01	9.9555E-01	
90479	244.22	7.4872E-01	9.3333E-01	9.4650E-01	9.8625E-01	9.9332E-01	9.9449E-01	
100227	277.06	7.1400E-01	9.1141E-01	9.4129E-01	9.8463E-01	9.9233E-01	9.9349E-01	
110347	231.12	6.7226E-01	8.6842E-01	9.2357E-01	9.7600E-01	9.8610E-01	9.9217E-01	
120506	232.13	6.2357E-01	8.5523E-01	9.1579E-01	9.7164E-01	9.8099E-01	9.9145E-01	
130746	231.48	5.9567E-01	8.3504E-01	9.0739E-01	9.6753E-01	9.7775E-01	9.8941E-01	
140242	227.25	5.6582E-01	8.1187E-01	8.9779E-01	9.6290E-01	9.7407E-01	9.8632E-01	
1505175	224.61	5.3436E-01	7.8523E-01	8.8701E-01	9.5777E-01	9.6999E-01	9.8725E-01	
1607700	227.23	4.9934E-01	7.5280E-01	8.7362E-01	9.5132E-01	9.6460E-01	9.8597E-01	
1705000	224.55	4.6525E-01	7.1814E-01	8.5384E-01	9.4415E-01	9.5881E-01	9.6405E-01	
1801500	225.41	4.3125E-01	6.7920E-01	8.4137E-01	9.3594E-01	9.5214E-01	9.8314E-01	
1907900	223.92	3.9470E-01	6.3612E-01	8.2060E-01	9.2645E-01	9.4457E-01	9.6155E-01	
2004200	218.14	3.5826E-01	5.8817E-01	7.9280E-01	9.1601E-01	9.3640E-01	9.7944E-01	
2104000	214.59	3.2079E-01	5.4353E-01	7.6641E-01	9.0473E-01	9.2775E-01	9.7732E-01	
2205500	210.87	2.8199E-01	4.7763E-01	7.3539E-01	8.9235E-01	9.1542E-01	9.7492E-01	
2305000	207.04	2.4243E-01	4.4160E-01	7.0154E-01	8.7867E-01	9.0844E-01	9.7224E-01	
2404500	198.62	2.0168E-01	3.4987E-01	6.6935E-01	8.6452E-01	9.8601E-01	9.8335E-01	
2501900	191.57	1.6198E-01	2.8773E-01	6.1971E-01	8.4983E-01	9.8747E-01	9.6655E-01	
2604000	189.43	1.2225E-01	2.1124E-01	5.7185E-01	8.3347E-01	9.7595E-01	9.5335E-01	
2702800	195.59	8.9771E-02	1.44842E-01	5.1849E-01	8.1295E-01	9.5205E-01	9.5912E-01	
2804300	222.51	6.3519E-02	9.6260E-02	4.5703E-01	7.8523E-01	8.4451E-01	9.5231E-01	
2907513	219.55	4.4318E-02	5.6257E-02	3.8933E-01	7.4922E-01	8.2321E-01	9.4371E-01	
3007100	217.72	3.2801E-02	2.8929E-02	2.8327E-01	7.0335E-01	7.9780E-01	9.3075E-01	
3102200	226.57	2.5605E-02	1.4276E-02	2.4747E-01	6.1931E-01	7.6800E-01	9.1252E-01	
3207900	234.65	2.1491E-02	4.6919E-03	1.8164E-01	5.7565E-01	7.3406E-01	9.0823E-01	
3305500	247.72	1.8990E-02	1.3746E-03	1.2634E-01	4.9882E-01	6.9573E-01	9.5812E-01	
3409200	249.21	1.7127E-02	3.1307E-04	7.7792E-02	4.1540E-01	6.4995E-01	9.2631E-01	
3508900	258.04	1.5478E-02	5.6554E-03	4.3333E-02	3.2907E-01	5.9553E-01	7.7280E-01	
3603700	262.95	1.3953E-02	4.8120E-05	2.1196E-02	2.4903E-01	5.3635E-01	7.1806E-01	
3703500	269.74	1.2511E-02	1.3428E-06	8.8983E-03	1.7839E-01	4.7378E-01	6.5785E-01	
3801900	276.07	1.1122E-02	1.9439E-07	3.1071E-03	1.2113E-01	4.0802E-01	5.9212E-01	
3904100	241.07	9.7375E-03	2.1432E-04	3.7448E-04	7.7334E-02	3.4047E-01	5.2251E-01	
4006700	245.14	8.5038E-03	1.4471E-09	1.8979E-04	4.6307E-02	2.7310E-01	4.4914E-01	
4104800	287.47	6.3275E-03	4.2288E-11	2.4735E-05	2.1849E-02	1.8007E-01	3.1631E-01	
4208000	293.82	3.1655E-03	2.9771E-13	1.2352E-06	5.8311E-03	7.3932E-02	1.3943E-01	
4301110	302.64	1.0382E-03	3.7035E-10	1.8468E-08	8.1425E-04	1.7684E-02	3.7227E-02	
TOTAL RADIANCE		5.6992E-06	4.2566E-06	4.6461E-06	6.6033E-06	8.7466E-06	1.0133E-06	

Table 3. (Cont)

KWAJALEIN
4/01/75
8531

PRESSURE (mb)	TEMPERATURE (K)	FREQUENCY						TRANSMITTANCE
		668	676	695	707	727	747	
.1124	242.67	9.6516E-01	9.9515E-01	9.6795E-01	9.9895E-01	1.0000E+00	9.9825E-01	
.2176	254.37	9.5207E-01	9.9140E-01	9.4300E-01	9.9885E-01	9.9990E-01	9.9793E-01	
.6664	267.78	9.0921E-01	9.8773E-01	9.7362E-01	9.9821E-01	9.938E-01	9.9731E-01	
.8625	262.07	8.9457E-01	9.8132E-01	9.7773E-01	9.9777E-01	9.9968E-01	9.9713E-01	
1.9453	271.75	8.3109E-01	9.6574E-01	9.6669E-01	9.9405E-01	9.9826E-01	9.9531E-01	
7.3752	257.59	7.7461E-01	9.4600E-01	9.5386E-01	9.9855E-01	9.9921E-01	9.9923E-01	
6.1261	238.71	7.0228E-01	9.0807E-01	9.3687E-01	9.8082E-01	9.8389E-01	9.8382E-01	
15.1570	230.44	5.4165E-01	7.9317E-01	8.8819E-01	9.5639E-01	9.5965E-01	9.8071E-01	
28.2657	218.20	4.0157E-01	5.4524E-01	8.2346E-01	9.2625E-01	9.4534E-01	9.6119E-01	
51.7000	208.18	2.5612E-01	4.3417E-01	7.1304E-01	8.8245E-01	9.1201E-01	9.7331E-01	
75.7300	190.71	1.6446E-01	2.8719E-01	6.2212E-01	8.5117E-01	9.8835E-01	9.6667E-01	
103.3500	191.17	9.9614E-02	1.6192E-01	5.7697E-01	8.1957E-01	8.6695E-01	9.6585E-01	
128.6800	197.92	6.4999E-02	9.9394E-02	4.6384E-01	7.8879E-01	8.4687E-01	9.5385E-01	
200.8000	221.18	2.7299E-02	1.6474E-02	2.7391E-01	6.1203E-01	7.7932E-01	9.2195E-01	
240.5100	235.12	2.1773E-02	4.9097E-03	1.9123E-01	5.8755E-01	7.3751E-01	8.9344E-01	
300.1100	244.21	1.8016E-02	6.6333E-04	1.0105E-01	4.5964E-01	6.737E-01	8.4133E-01	
780.6400	255.16	1.5147E-02	3.4776E-05	3.7722E-02	3.1177E-02	5.7893E-01	7.6617E-01	
463.0700	265.51	1.2940E-02	2.0813E-06	1.1719E-02	1.9531E-01	4.8831E-01	6.8031E-01	
542.2700	273.17	1.1116E-02	1.8725E-07	3.2294E-03	1.2282E-01	4.0402E-01	5.9645E-01	
613.1000	287.32	9.8136E-03	2.0112E-08	8.9559E-04	7.7943E-02	3.3312E-01	5.2542E-01	
691.7700	282.92	8.5217E-03	1.3114E-09	1.9437E-04	4.6477E-02	2.7111E-01	4.5133E-01	
756.3500	287.22	7.5578E-03	1.1169E-10	5.2202E-05	3.0394E-02	2.2245E-01	3.9344E-01	
902.4900	285.75	6.5987E-03	1.5701E-11	1.3119E-05	2.1155E-02	1.8224E-01	3.3339E-01	
951.7600	290.61	5.0677E-03	1.4925E-12	4.7611E-06	1.2251E-02	1.2397E-01	2.4311E-01	
878.1800	290.77	4.3081E-03	3.9903E-13	2.2319E-06	8.9737E-03	1.1491E-01	1.9999E-01	
801.9900	291.64	3.6006E-03	9.7912E-14	4.9207E-07	6.4093E-03	8.3382E-02	1.6141E-01	
928.4100	293.14	2.8750E-03	2.0894E-14	3.9593E-07	4.2721E-03	5.211E-02	1.2375E-01	
955.4200	295.69	2.1956E-03	3.8647E-15	1.4143E-07	2.7313E-03	4.4521E-02	8.9911E-02	
1010.6000	302.29	1.1707E-03	8.6902E-17	1.3444E-05	9.0129E-04	1.3372E-02	4.2539E-02	
TOTAL RADIANCE		5.7700E-06	4.2667E-06	4.5937E-06	6.6595E-05	3.5458E-06	1.0226E-05	

Table 4. Comparison of Measured With Computed Radiances for the 9 Cases Studied

	Location	Date	θ	668	676	695	707	727	746
Calc	Barking Sands	2/25/75	4.5°	55.1	41.9	45.1	65.0	84.9	100.3
Meas	22.0N 159.8W	8531		54.1	42.5	41.5	57.4	79.9	95.0
Calc	Pt. Mugu	2/18/75	9.4°	57.8	45.0	44.9	58.3	76.6	90.6
Meas	34.1N 119.1W	8531		57.6	46.1	43.1	52.4	71.3	86.0
Calc	Kwajalein	2/28/75	0.5°	57.0	42.6	46.5	68.0	87.5	101.8
Meas	8.7N 167.7E	8531		55.1	42.2	41.7	59.5	83.0	98.4
Calc	Kwajalein	2/27/75	37.1°	58.7	43.7	44.6	64.3	83.9	98.1
Meas	8.7N 167.7E	9532		56.0	43.7	39.9	56.6	77.0	95.0
Calc	Barking Sands	2/28/75	37.0°	54.7	42.3	43.1	60.6	80.2	95.8
Meas	22.0N 159.8W	9532		53.1	42.6	39.0	53.6	71.8	88.6
Calc	Barking Sands	2/18/75	37.0°	58.6	44.5	45.1	61.4	79.6	94.5
Meas	22.0N 159.8W	9532		54.8	43.6	40.3	53.3	71.0	86.2
Calc	Barking Sands	2/26/75	46.4°	57.3	43.4	43.3	59.5	79.4	95.1
Meas	22.0N 159.8W	8531		54.9	44.2	40.0	52.7	73.8	89.7
Calc	Kwajalein	2/20/75	27.5°	59.5	44.5	46.6	66.9	85.9	101.1
Meas	8.7N 167.7E	9532		54.4	42.4	40.8	60.9	80.7	97.5
Calc	Kwajalein	4/1/75	22.6°	57.7	42.7	45.9	66.6	85.5	100.2
Meas	8.7N 167.7E	8531		57.0	43.0	41.2	58.2	80.1	94.8

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